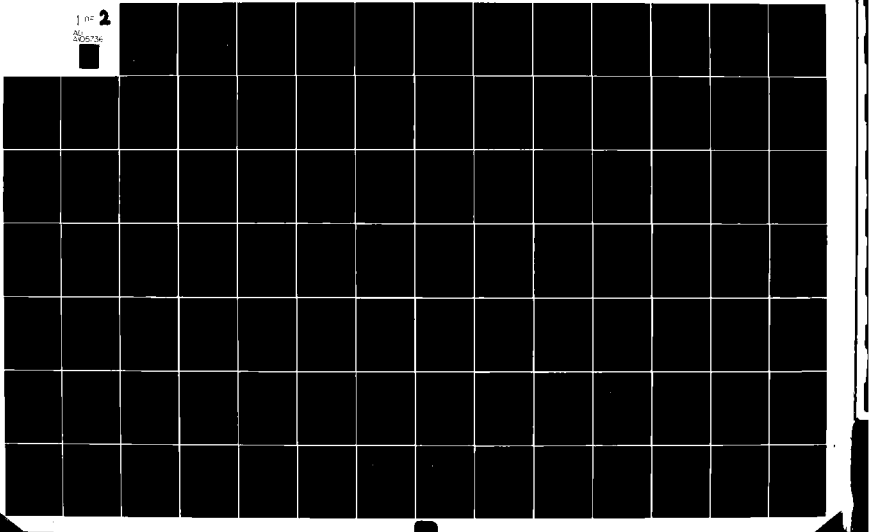
AD-A105 736 KANSAS UNIV/CENTER FOR RESEARCH INC LAWRENCE REMOTE --ETC F/G 17/9
MEASUREMENTS OF RADAR BACKSCATTER FORM ARCTIC SEA ICE IN THE SU--ETC(U)
JUL 81 R G ONSTOTT, S GOGINENI, R K MOORE N00014-76-C-1105
UNCLASSIFIED CRINC/RSL-TM-331-22 NL



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LEVEL II

~~COMPILATION OF DATA~~
APPENDICES A AND B
~~for~~
(6) MEASUREMENTS OF RADAR BACKSCATTER FROM ARCTIC SEA ICE IN THE SUMMER
~~RSL TR 331-20~~
(14) CRINC/KU-TM-331-22

by
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Remote Sensing Laboratory
Center for Research, Inc.
The University of Kansas
Lawrence, Kansas 66045

(9) RSL Technical Memorandum
RSL TM 331-22
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APPENDIX A

RAW RADAR BACKSCATTER DATA

Site-RI-TFY

Frequency = 9 GHz

Angle of Incidence = 0°

Number of Returns = 10

-26.0 -29.3 -29.1 -31.2 -27.3 -27.0 -29.1

-30.2 -30.5 -29.9

Angle of Incidence = 20°

Number of Returns = 16

-33.0 -33.0 -36.0 -35.0 -38.0 -37.0 -37.0

-37.0 -36.0 -35.0 -35.0 -36.0 -37.0 -38.0

-35.0 -35.0

Angle of Incidence = 38°

Number of Returns = 9

-45.1 -45.8 -45.2 -49.0 -49.0 -50.0 -49.5

-49.0 -50.3

Accession For
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Unannounced
Justification
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By
Distribution/
Availability Codes
Dist | Avail and/or Special
A

Site-R2-TFY

Frequency = 9 GHz

Angle of Incidence = 0°

Number of Returns = 17

-15.0		-13.0		-11.0		-9.0		-12.5		-14.5		-16.0				
-17.0		-17.0		-15.0		-9.0		- 9.0		- 9.0		-10.0				
-10.5		-12.0		-13.3												

Angle of Incidence = 13°

Number of Returns = 51

-35.0		-36.0		-38.0		-36.0		-36.0		-34.0		-35.0				
-33.0		-34.0		-37.0		-29.0		-30.0		-35.0		-37.0				
-33.0		-34.0		-35.0		-35.0		-36.0		-35.0		-36.0				
-37.0		-36.0		-37.0		-36.0		-38.0		-37.0		-34.0		-32.0		
-35.0		-35.0		-32.0		-31.0		-32.0		-36.0		-36.0		-33.0		
-35.0	-34.0	-35.0	-33.0	-31.0	-27.0	-32.0	-33.0	-35.0	-34.0	-32.0	-34.2	-33.0	-31.0			

Angle of Incidence = 25°

Number of Returns = 7

-38.0		-37.0		-38.0		-37.0		-35.0		-36.0		-37.0				

Angle of Incidence = 38°

Number of Returns = 4

-38.1		-37.0		-38.0		-38.0										

Angle of Incidence = 50°

Number of Returns = 7

-41.0		-40.7		-43.0		-43.0		-42.0		-43.0		-42.0				

Site-R3-

Data was lost due to malfunction.

SITE-R4-NOT-GIVEN INCIDENCE ANGLE = 0.

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 15

-34.30	-34.01	-33.92	-35.08	-34.96
-34.43	-35.09	-39.59	-38.71	-34.13
-33.50	-34.75	-31.22	-32.16	-31.77

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 9

-30.32	-34.50	-33.50	-32.49	-33.29
-33.45	-32.15	-30.46	-29.52	

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 13

-38.11	-39.56	-38.31	-38.66	-37.49
-34.32	-37.86	-36.14	-35.41	-33.04
-35.42	-37.61	-34.37		

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 9

-35.73	-37.36	-32.66	-36.69	-31.42
-32.58	-32.17	-32.33	-32.46	

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 6

-49.71	-49.54	-52.72	-50.76	-50.22
-50.09				

SITE-R4-DRIFT INCIDENCE ANGLE = 0.

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 20

-34.09	-35.16	-34.16	-34.21	-35.72
-35.24	-30.78	-30.72	-34.76	-34.65
-35.32	-34.83	-32.11	-32.20	-34.96
-34.24	-33.84	-31.15	-34.20	-33.81

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 8

-47.07	-50.02	-49.05	-47.84	-53.98
-54.56	-49.45	-50.85		

SITE-R4-NOT-GIVEN INCIDENCE ANGLE = 25.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 22

-38.26	-37.70	-37.67	-37.19	-36.34
-37.14	-40.17	-40.48	-39.61	-41.25
-41.70	-38.84	-37.67	-38.56	-36.94
-40.24	-38.06	-36.95	-39.56	-38.16
-40.76	-39.42			

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 14

-42.91	-42.50	-44.32	-41.42	-41.58
-41.37	-40.96	-38.15	-36.45	-37.08
-39.62	-39.42	-39.20	-40.63	

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 10

-52.04	-51.88	-50.27	-51.24	-52.20
-52.15	-51.56	-51.90	-51.98	-52.11

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 26

-47.64	-46.66	-36.54	-38.71	-36.62
-51.13	-37.45	-50.08	-38.16	-37.18
-36.14	-49.11	-35.61	-38.67	-40.00
-38.30	-37.15	-37.40	-37.24	-46.79
-48.72	-47.44	-46.61	-46.58	-47.33
-46.52				

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 14

-32.41	-34.49	-34.21	-34.45	-34.35
-34.34	-34.32	-35.83	-35.24	-35.31
-34.96	-35.18	-35.01	-34.97	

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

SITE-R4-DRIFT INCIDENCE ANGLE = 25.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 15

-36.73	-38.21	-38.76	-38.07	-38.74
-35.96	-38.59	-36.80	-38.70	-38.46
-39.34	-38.98	-38.52	-38.68	-39.24

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 6

-52.08	-50.49	-53.12	-52.73	-50.13
-53.02				

SITE-R4-DRIFT INCIDENCE ANGLE = 38.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 26

-38.25	-37.90	-39.92	-39.98	-39.63
-39.32	-39.56	-39.57	-40.35	-40.25
-40.60	-41.32	-41.48	-40.56	-40.52
-40.80	-40.47	-40.23	-40.79	-40.00
-39.45	-40.42	-40.10	-37.50	-40.01
-39.54				

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 15

-56.07	-52.84	-55.50	-50.95	-53.02
-51.53	-52.05	-51.50	-52.85	-51.35
-52.29	-52.65	-53.58	-52.39	-51.27

SITE-R4-NOT-GIVEN INCIDENCE ANGLE = 38.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 20

-38.06	-37.99	-37.70	-37.24	-37.47
-36.97	-38.20	-37.40	-38.40	-35.60
-38.29	-38.77	-39.95	-39.74	-39.46
-39.05	-39.50	-39.50	-38.75	-38.00

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 16

-38.92	-38.91	-37.81	-38.02	-38.34
-37.94	-38.05	-39.43	-38.79	-37.25
-37.74	-38.14	-37.92	-38.11	-37.71
-36.75				

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 17

-39.85	-41.18	-40.62	-42.08	-42.27
-42.45	-40.03	-40.44	-39.95	-40.01
-39.98	-40.57	-40.19	-39.88	-41.37
-41.44	-39.49			

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 17

-38.56	-39.76	-37.87	-38.43	-40.01
-40.50	-48.95	-39.91	-40.95	-37.84
-37.80	-38.16	-37.22	-39.16	-39.85
-39.79	-40.11			

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 13

-52.96	-52.72	-51.85	-53.56	-54.05
-53.53	-53.95	-53.95	-52.40	-54.40
-50.61	-52.51	-51.35		

SITE-R4-NOT-GIVEN INCIDENCE ANGLE = 50.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 13

-42.15	-41.66	-43.01	-43.35	-42.95
-42.88	-42.49	-42.14	-42.52	-43.21
-43.13	-43.96	-43.79		

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 17

-41.97	-41.67	-41.77	-41.64	-41.50
-41.00	-42.90	-40.77	-40.59	-39.48
-41.36	-41.64	-41.82	-41.40	-42.18
-41.58	-41.03			

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 12

-43.14	-44.11	-43.35	-42.95	-42.76
-42.98	-44.34	-44.59	-45.00	-45.88
-44.94	-45.72			

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 13

-42.67	-44.34	-44.46	-45.04	-44.32
-44.36	-44.09	-45.04	-46.66	-46.93
-46.81	-46.27	-46.67		

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 8

-55.85	-55.34	-53.91	-52.95	-53.18
-53.78	-53.14	-55.97		

SITE-R4-DRIFT INCIDENCE ANGLE = 50.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 30

-41.20	-41.50	-40.92	-39.63	-39.86
-41.00	-40.03	-40.27	-41.43	-38.16
-39.45	-39.68	-40.64	-38.02	-41.18
-39.70	-41.40	-39.62	-39.88	-39.17
-39.04	-39.21	-38.89	-40.70	-43.01
-43.28	-43.71	-43.83	-44.45	-44.66

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 14

-53.56	-52.94	-50.99	-50.49	-53.62
-53.24	-52.05	-51.96	-51.75	-52.41
-56.76	-58.26	-56.61	-57.06	

SITE RS-P1 THIN INCIDENCE ANGLE = 12.5

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 13

-37.58	-39.00	-37.00	-36.72	-37.31
-32.36	-39.00	-34.47	-39.46	-35.16
-39.12	-34.51	-34.96		

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 5

-39.45	-39.12	-39.17	-38.13	-39.64

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 7

-36.43	-36.14	-42.99	-45.22	-45.55
-45.81	-46.30			

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 6

-38.39	-40.21	-38.28	-38.35	-37.56
-36.24				

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 8

-47.64	-48.15	-44.69	-43.64	-39.08
-38.83	-43.54	-43.97		

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 7

-43.78	-44.85	-40.96	-45.52	-45.01
-46.20	-40.97			

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 4

-47.15	-49.43	-44.87	-47.37

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 28

-49.19	-50.77	-49.71	-50.49	-49.69
-40.63	-45.20	-51.26	-46.07	-48.09
-47.82	-48.15	-46.55	-46.55	-46.19
-47.19	-46.89	-46.30	-47.14	-46.69
-46.43	-47.15	-47.21	-42.61	-46.47
-42.00	-46.01	-41.39		

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 14

-52.59	-55.56	-54.27	-54.65	-56.80
-55.14	-54.87	-56.50	-54.39	-56.31
-54.18	-55.82	-55.80	-52.55	

SITE-R5-P2-MY INCIDENCE ANGLE = 12.5

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 14

-38.00	-38.00	-38.25	-38.70	-39.26
-38.79	-35.36	-37.55	-34.71	-38.26
-35.68	-36.63	-35.46	-34.22	

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 5

-32.39	-31.55	-36.08	-34.20	-36.22

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 11

-34.44	-33.35	-34.31	-37.00	-33.14
-35.58	-38.26	-32.86	-38.43	-34.35
-38.95				

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 10

-34.88	-38.11	-36.00	-40.19	-38.40
-38.94	-37.25	-39.38	-39.33	-37.77

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 16

-43.24	-40.89	-38.35	-38.26	-38.17
-39.17	-42.75	-40.76	-42.35	-45.40
-48.24	-42.75	-39.00	-39.77	-46.46
-45.98				

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 5

-40.30	-40.25	-37.62	-39.97	-37.40

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 6

-43.12	-41.44	-40.30	-41.20	-39.85
-39.64				

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 13

-47.71	-42.10	-43.15	-43.20	-45.39
-42.92	-45.97	-45.84	-44.47	-46.24
-43.46	-45.98	-45.06		

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 10

-54.63	-50.83	-50.98	-51.24	-49.73
-49.15	-50.33	-53.48	-52.70	-52.60

SITE-R5-P2-THIN INCIDENCE ANGLE = 25.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 16

-44.99	-45.34	-44.92	-44.96	-46.72
-49.76	-48.07	-40.10	-45.78	-46.11
-44.34	-45.44	-45.43	-46.00	-45.99
-46.18				

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 6

-40.24	-39.69	-40.01	-38.68	-38.34
-39.79				

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 13

-44.86	-43.84	-43.15	-47.04	-47.61
-47.76	-44.93	-48.16	-46.86	-48.21
-46.64	-48.04	-47.44		

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 7

-39.50	-40.50	-41.28	-41.72	-42.00
-42.27	-42.64			

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 15

-50.19	-45.16	-50.46	-50.80	-50.79
-50.55	-51.37	-47.48	-51.60	-49.40
-51.80	-49.55	-50.58	-51.38	-48.18

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 8

-49.08	-47.96	-48.55	-48.06	-47.35
-47.30	-48.31	-49.27		

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 6

-48.44	-50.13	-49.04	-49.86	-50.57
-50.15				

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 6

-47.63	-47.13	-46.80	-46.55	-47.92
-48.12				

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 12

-56.74	-52.35	-58.16	-58.55	-57.61
-55.23	-57.55	-55.62	-57.09	-54.08
-55.39	-54.13			

SITE-R5-P2-NY INCIDENCE ANGLE = 25.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 28

-38.10	-40.34	-39.23	-38.23	-40.70
-39.78	-36.43	-38.17	-38.09	-38.55
-37.73	-38.80	-36.79	-39.87	-37.90
-38.53	-39.04	-37.62	-37.60	-39.21
-39.67	-42.23	-40.20	-39.25	-38.51
-39.15	-37.66	-39.55		

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 9

-35.56	-40.10	-39.39	-37.25	-37.30
-40.41	-36.00	-36.61	-37.96	

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 9

-40.17	-41.02	-39.17	-41.00	-40.88
-42.52	-40.38	-39.42	-41.12	

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 8

-41.44	-39.17	-38.98	-38.38	-38.27
-39.11	-37.98	-39.50		

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 19

-39.16	-46.94	-46.78	-43.56	-45.30
-42.88	-43.55	-40.47	-43.17	-46.57
-45.62	-44.50	-40.28	-45.59	-43.68
-42.84	-41.23	-45.18	-45.44	

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 8

-44.45	-43.75	-48.69	-46.35	-44.42
-38.79	-41.96	-39.02		

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 4

-40.27	-41.39	-44.08	-44.16

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 12

-41.84	-46.11	-43.41	-43.99	-43.26
-44.66	-47.65	-46.32	-45.66	-46.36
-46.44	-46.82			

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 25

-51.94	-52.70	-52.01	-50.43	-49.90
-54.51	-49.82	-50.97	-53.14	-50.96
-52.80	-49.16	-49.24	-51.17	-50.18
-51.90	-53.75	-51.99	-53.00	-52.47
-52.51	-51.65	-53.05	-51.69	-53.51

SITE-R5-P1-NEW INCIDENCE ANGLE = 38.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 16

-13.54	-14.31	-14.19	-14.30	-14.25
-14.38	-14.16	-14.16	-14.24	-15.98
-16.23	-16.07	-16.16	-16.12	-15.82
-16.27				

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 8

-16.00	-15.72	-15.92	-15.99	-16.10
-16.10	-16.05	-15.96		

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 7

-18.30	-18.28	-18.25	-18.19	-18.08
-18.39	-18.17			

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 8

-20.91	-21.00	-21.01	-20.75	-20.86
-20.99	-21.02	-20.98		

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 13

-22.73	-22.30	-23.06	-23.35	-23.18
-22.86	-23.29	-23.32	-23.25	-23.57
-23.52	-23.67	-23.20		

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 4

-23.36	-23.45	-23.73	-23.49

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 5

-22.88	-23.27	-23.26	-22.92	-23.46

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 5

-25.10	-24.60	-25.00	-25.01	-25.01

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 15

-27.46	-27.37	-27.62	-27.61	-27.11
-27.18	-27.00	-26.99	-28.28	-27.17
-27.82	-27.55	-27.50	-27.00	-26.97

SITE-RS-P1 INCIDENCE ANGLE = 38.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 13

-47.66	-47.62	-48.12	-48.60	-48.41
-48.93	-48.69	-48.76	-40.11	-50.37
-47.50	-46.00	-47.62		

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 6

-44.96	-45.00	-45.07	-44.71	-44.83
-45.00				

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 6

-49.23	-49.04	-47.97	-44.02	-45.18
-45.45				

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 6

-42.09	-41.56	-41.45	-40.90	-40.78
-40.47				

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 11

-52.67	-52.80	-52.45	-53.10	-52.61
-52.65	-53.06	-53.22	-53.76	-52.83
-52.93				

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 8

-51.48	-50.70	-50.71	-50.43	-49.20
-49.68	-49.15	-50.25		

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 13

-46.60	-49.80	-49.46	-51.20	-52.28
-52.33	-51.89	-51.60	-50.30	-48.40
-50.58	-49.72	-50.79		

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 10

-49.05	-48.99	-50.40	-51.15	-50.70
-50.99	-50.94	-51.12	-50.66	-50.40

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 12

-58.76	-58.62	-59.16	-58.68	-59.01
-59.16	-59.90	-60.38	-59.66	-60.09
-59.80	-59.53			

SITE-R5-P2 INCIDENCE ANGLE = 38.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 12

-47.30	-45.38	-42.24	-41.04	-38.07
-42.11	-42.69	-41.89	-40.53	-39.26
-42.82	-42.13			

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 11

-39.95	-40.40	-40.62	-39.92	-41.29
-40.47	-40.94	-40.88	-41.51	-41.35
-40.53				

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 8

-39.07	-39.97	-38.63	-40.95	-40.29
-42.74	-39.41	-39.91		

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 10

-33.80	-33.42	-33.06	-33.18	-33.02
-33.25	-33.20	-33.38	-32.50	-33.32

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 15

-45.43	-46.04	-47.05	-45.50	-43.44
-44.59	-48.28	-41.25	-40.55	-43.63
-43.72	-48.54	-41.44	-43.08	-42.81

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 7

-46.56	-45.36	-43.66	-43.01	-41.40
-41.90	-42.59			

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 6

-42.23	-41.50	-41.92	-40.63	-41.08
-43.01				

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 8

-47.34	-48.35	-49.35	-48.99	-47.61
-48.73	-44.60	-45.03		

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 14

-54.52	-58.16	-59.20	-58.40	-52.63
-53.77	-52.96	-53.74	-52.85	-49.91
-55.96	-53.64	-53.02	-52.51	

SITE-R5-P2-HY INCIDENCE ANGLE = 38.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 5
-14.31 -13.85 -13.94 -14.37 -14.32

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 5
-11.27 -11.30 -12.26 -11.40 -11.46

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 0

SITE-R5-MP INCIDENCE ANGLE = 38.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 4
-48.13 -47.40 -46.70 -46.48

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 5
-52.72 -51.93 -52.12 -52.63 -52.80

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 6
-59.30 -58.57 -54.55 -56.38 -59.68
-57.05

SITE-RS-P1-THIN INCIDENCE ANGLE = 50.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 10
-55.67 -55.80 -55.57 -55.48 -55.89
-56.11 -56.02 -56.35 -55.72 -56.22

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 7
-47.97 -48.02 -48.31 -48.33 -48.20
-48.34 -48.10

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 11
-59.82 -55.06 -55.20 -55.40 -54.87
-54.99 -56.52 -55.37 -55.32 -55.44
-54.28

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 9
-50.55 -50.00 -50.54 -50.65 -50.70
-50.75 -50.62 -50.71 -50.24

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 12
-58.33 -57.71 -58.54 -57.38 -58.43
-58.23 -58.45 -58.30 -58.15 -58.36
-58.31 -58.20

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 8
-54.70 -53.25 -53.11 -53.15 -53.12
-53.18 -53.20 -53.23

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 6
-56.39 -52.22 -57.29 -57.55 -57.92
-57.78

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 14
-58.42 -58.33 -58.61 -48.00 -49.95
-47.63 -48.03 -48.09 -48.03 -48.20
-47.95 -48.36 -48.03 -48.24

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 13
-49.07 -49.65 -52.60 -51.09 -53.11
-51.75 -52.94 -52.22 -53.10 -52.12
-53.06 -52.43 -52.92

SITE-R5-P1 INCIDENCE ANGLE = 50.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 17

-45.98	-45.48	-45.73	-45.33	-44.35
-45.36	-46.01	-46.29	-46.02	-46.37
-54.84	-54.29	-54.15	-54.32	-54.42
-54.37	-54.31			

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 5

-46.75	-46.47	-46.03	-46.38	-46.25

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 7

-51.18	-47.40	-46.27	-47.05	-47.86
-48.02	-48.28			

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 9

-47.72	-48.37	-47.59	-48.29	-48.21
-48.62	-48.15	-49.15	-48.71	

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 13

-49.26	-49.68	-49.23	-51.15	-49.24
-51.52	-49.29	-48.95	-49.70	-50.12
-49.71	-49.93	-49.38		

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 8

-50.60	-48.18	-48.25	-49.72	-50.34
-51.55	-52.80	-52.46		

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 8

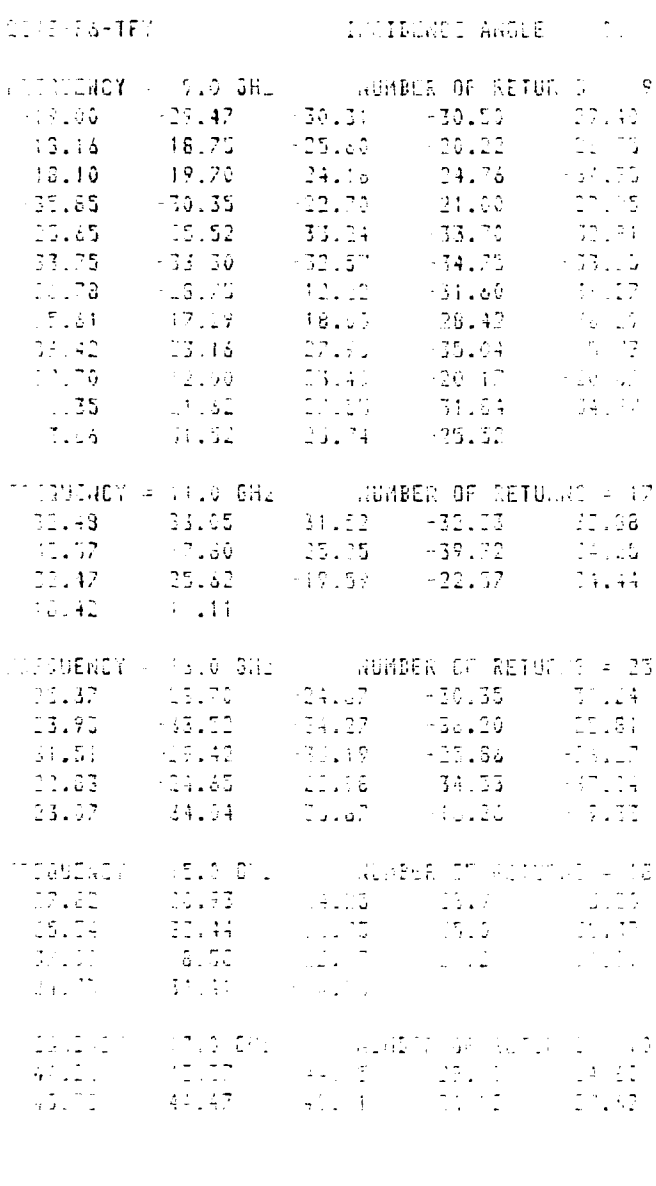
-53.26	-54.32	-53.52	-54.64	-46.62
-51.71	-52.37	-54.21		

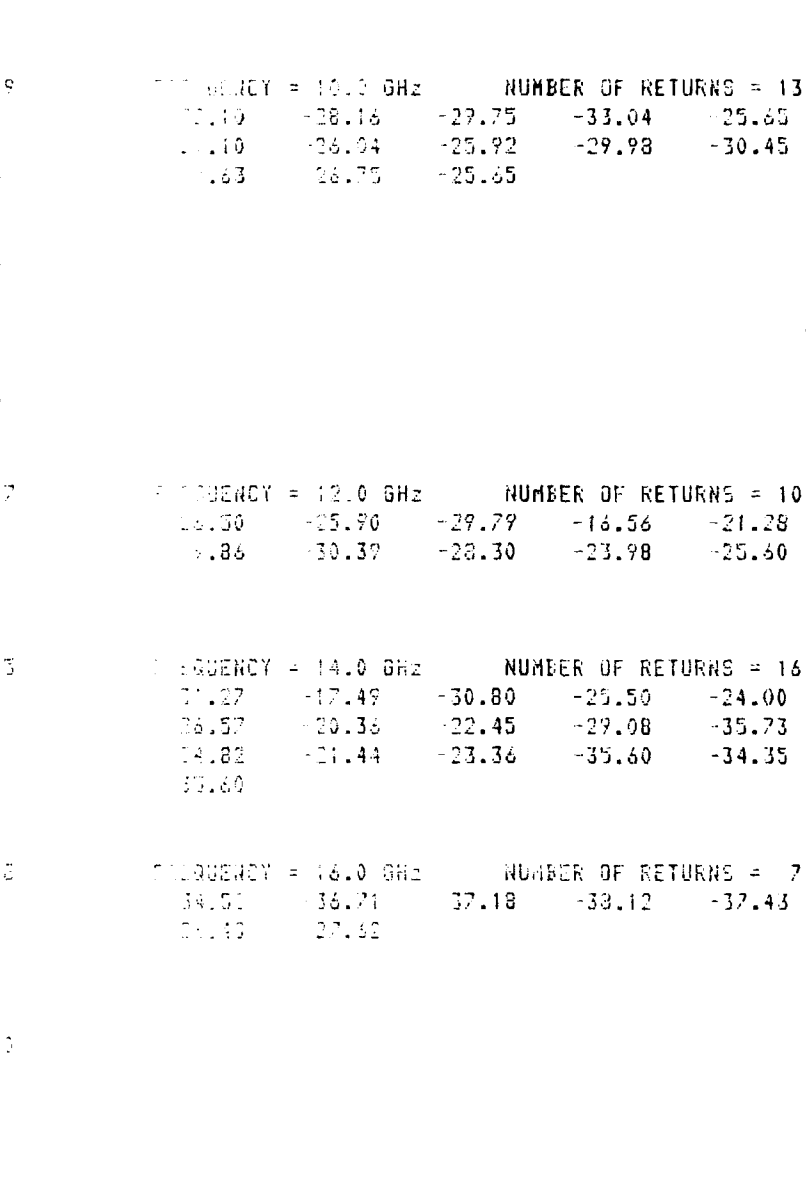
FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 6

-55.63	-56.00	-56.11	-55.25	-58.71
-57.50				

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 8

-57.35	-58.23	-58.50	-58.70	-57.21
-58.37	-58.01	-57.87		





[illegible]-TFY INCIDENCE ANGLE [illegible]

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 9

-19.00	-29.47	-30.31	-30.50	[illegible]
13.16	18.75	-25.60	-20.22	[illegible]
18.10	19.70	24.16	24.76	[illegible]
-35.85	-30.35	-22.70	21.00	[illegible]
25.65	25.52	33.24	-33.70	[illegible]
33.75	-33.30	-32.57	-34.75	[illegible]
[illegible]	[illegible]	[illegible]	-31.60	[illegible]
[illegible]	17.19	[illegible]	28.42	[illegible]
[illegible]	23.16	[illegible]	-35.04	[illegible]
[illegible]	[illegible]	[illegible]	-20.17	[illegible]
[illegible]	[illegible]	[illegible]	31.84	[illegible]
[illegible]	31.52	23.74	-25.52	

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 13

[illegible]	-28.16	-29.75	-33.04	-25.65
[illegible]	-26.04	-25.92	-29.98	-30.45
[illegible]	26.75	-25.65		

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 17

32.48	33.05	31.52	-32.33	[illegible]
[illegible]	[illegible]	25.25	-39.72	[illegible]
32.47	25.62	-19.59	-22.57	34.44
[illegible]	[illegible]			

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 10

[illegible]	-25.90	-29.79	-16.56	-21.28
[illegible]	-30.39	-28.30	-23.98	-25.60

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 25

[illegible]	[illegible]	-24.67	-30.35	[illegible]
23.95	-33.52	-34.27	-36.20	[illegible]
31.51	-29.42	-33.19	-25.86	[illegible]
[illegible]	-24.65	[illegible]	34.33	[illegible]
23.07	34.04	[illegible]	[illegible]	[illegible]

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 16

[illegible]	-17.49	-30.80	-25.50	-24.00
26.57	-20.36	-22.45	-29.08	-35.73
34.82	-21.44	-23.36	-35.60	-34.35
35.60				

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 18

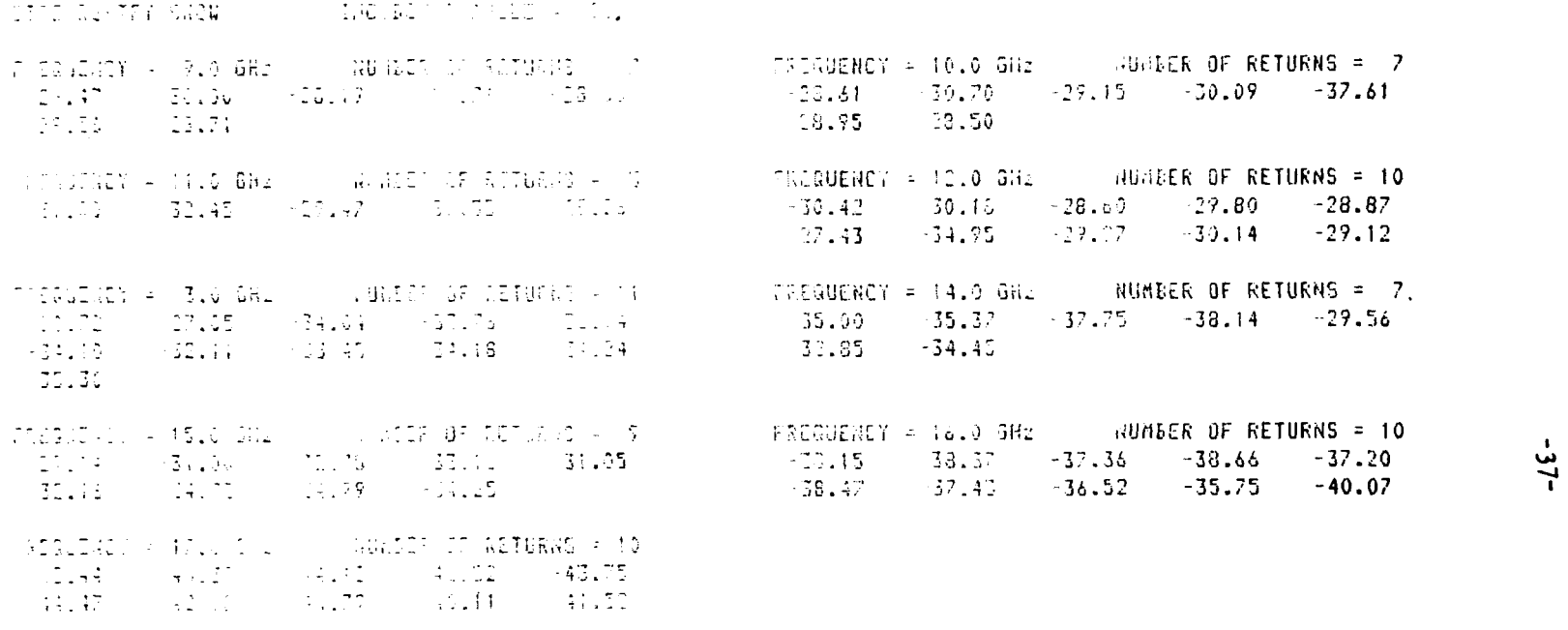
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]		

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 7

34.51	-36.71	37.18	-38.12	-37.43
[illegible]	27.62			

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	44.47	[illegible]	[illegible]	[illegible]



FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 7
-28.61 -30.70 -29.15 -30.09 -37.61
28.95 28.50

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 10
-30.42 30.16 -28.60 -29.80 -28.87
27.43 -34.95 -29.07 -30.14 -29.12

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 7
35.00 -35.37 -37.75 -38.14 -29.56
30.85 -34.45

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 10
-28.15 38.37 -37.36 -38.66 -37.20
-38.47 -37.43 -36.52 -35.75 -40.07

DISTANCE ANGLE = 0.

FREQUENCY = 8.0 GHz NUMBER OF RETURNS = 11

[illegible]	[illegible]	[illegible]	32.14	30.55
[illegible]	[illegible]	[illegible]	34.23	31.01
30.75				

FREQUENCY = [illegible] GHz NUMBER OF RETURNS = 5

[illegible]	[illegible]	[illegible]	-35.97	-38.68

FREQUENCY = [illegible] GHz NUMBER OF RETURNS = 9

[illegible]	[illegible]	[illegible]	38.46	37.68
35.33	[illegible]	[illegible]	37.53	

FREQUENCY = [illegible] GHz NUMBER OF RETURNS = 7

[illegible]	[illegible]	[illegible]	33.27	35.57
[illegible]	[illegible]			

FREQUENCY = [illegible] GHz NUMBER OF RETURNS = 9

[illegible]	[illegible]	[illegible]	47.35	46.97
[illegible]	[illegible]	[illegible]	[illegible]	

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 6

-29.49	-30.75	-33.30	-32.45	-33.93
-31.94				

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 5

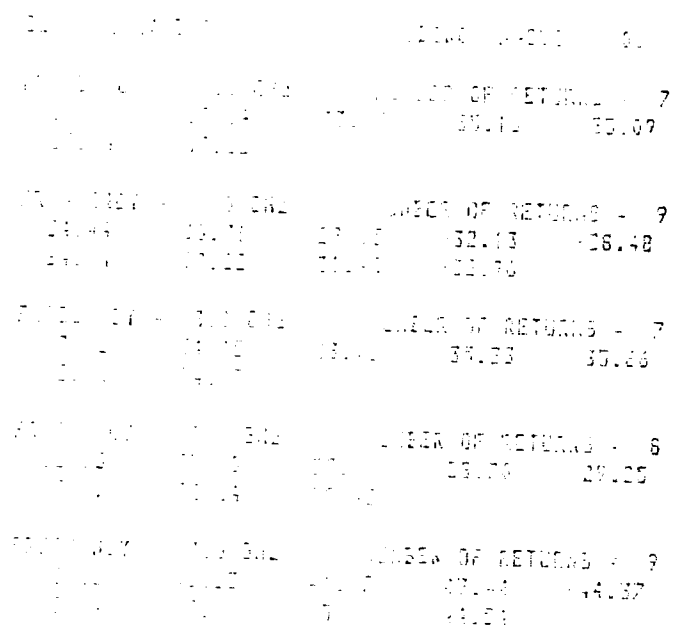
-30.44	-30.51	-30.70	-31.25	-31.77

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 9

-32.43	-37.75	-38.96	-39.89	-34.15
-30.65	-36.92	-35.37	-38.89	

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 16

-36.07	-42.93	-46.43	-35.64	-35.64
-37.84	-30.70	-42.50	-39.45	-41.55
-38.39	41.15	-39.83	-39.42	-38.15
-39.41				



FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 7
-31.57 -31.66 -33.09 -33.18 -35.90
-34.83 -35.18

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 5
-34.38 34.45 -36.65 -36.69 -35.00

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 7
-36.36 -38.75 -37.52 -37.56 -38.00
-37.69 -37.75

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 10
-36.43 -36.51 -36.67 -38.53 -38.17
-38.93 -40.86 -41.18 -38.20 -39.35

SITE-RS-NEW [illegible] INCIDENT ANGLE = [illegible]

FREQUENCY = [illegible] GHz NUMBER OF RETURNS = 11

22.37	[illegible]	[illegible]	-20.14	-20.78
20.75	[illegible]	-23.2[illegible]	[illegible]3.00	-21.58
-21.00				

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 10

-18.14	-18.31	-17.65	-21.95	-21.70
-22.16	-23.96	-24.00	-24.00	-26.28

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 8

-26.7[illegible]	-31.16	-29.04	-27.85	-22.50
-2[illegible]	-27.16	-26.[illegible]		

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 8

25.65	-27.28	-26.13	-27.24	-28.15
-27.03	-26.35	-28.30		

FREQUENCY = [illegible] GHz NUMBER OF RETURNS = 32

1[illegible]	[illegible]	[illegible]	-35.72	-31.62
32.[illegible]	[illegible]	[illegible]	22.04	-35.57
[illegible]	[illegible]	[illegible]	-27.57	-26.78
[illegible]	[illegible]	[illegible]	34.55	-36.58
[illegible]	[illegible]	[illegible]	26.50	-25.18
[illegible]	[illegible]	[illegible]	31.35	-32.00
[illegible]	[illegible]			

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 3

-28.52	-27.33	-26.38

FREQUENCY = [illegible] GHz NUMBER OF RETURNS = 11

[illegible]	[illegible]	[illegible]	31.18	[illegible]
[illegible]	[illegible]	[illegible]	-27.21	-28.85
[illegible]				

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 4

-32.78	-31.76	-34.18	-35.05

FREQUENCY = [illegible] GHz NUMBER OF RETURNS = 13

[illegible]	[illegible]	[illegible]	[illegible].30	34.25
[illegible]	[illegible]	[illegible]	[illegible].05	40.00
[illegible]	[illegible]	[illegible]		

[illegible] INCIDENCE [illegible]

FREQUENCY = [illegible] GHz NUMBER OF RETURNS = [illegible]

[illegible]	-15.16	[illegible]	[illegible]	[illegible]
[illegible]	11.22	-13.[illegible]		

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = [illegible]

[illegible]	[illegible]	12.47	[illegible]	[illegible]
[illegible]				

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = [illegible]

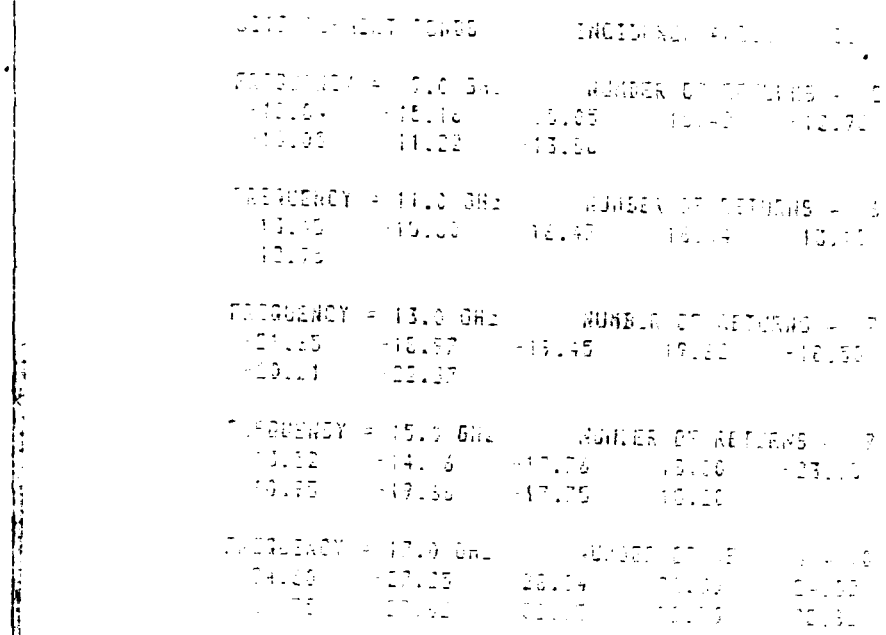
[illegible]	-18.57	-19.45	[illegible]	[illegible]
[illegible]	[illegible]			

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = [illegible]

[illegible]	[illegible]	-17.76	[illegible]	[illegible]
[illegible]	[illegible]	-17.75	[illegible]	

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]



FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 8

12.15	-14.75	-16.76	-18.05	-14.02
-11.21	10.7[illegible]	-9.65		

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 8

-18.41	-18.26	-21.23	-19.12	-17.47
-23.00	-20.00	-21.25		

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 4

20.00	-19.52	-17.47	-18.46

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 10

[illegible].25	26.48	-25.92	-33.80	-24.15
-16.95	-19.22	-23.14	-19.66	-21.25

SITE-R6-TFY INCIDENCE ANGLE = 12.5

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 16

-39.15	-40.81	-40.82	-39.66	-41.66
36.88	-36.40	-40.75	-37.16	-36.00
-36.45	-40.70	-41.48	-38.13	-35.27
35.08				

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 12

-35.74	-35.14	-36.50	-37.01	-37.16
-35.82	-35.83	-36.30	-37.14	-38.40
35.60	-34.10			

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 17

-38.25	-37.34	-38.24	-38.54	43.50
-46.95	-40.72	-40.66	-43.12	-39.92
41.74	-41.29	38.74	-37.28	-38.53
38.18	-37.53			

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 9

34.54	34.03	-34.25	-34.24	-32.90
[illegible]	-33.77	-32.50	-32.55	

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 10

-36.61	-25.65	-35.84	-30.96	-36.43
37.03	-43.04	-35.85	-36.00	-3[illegible].35

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 14

[illegible].91	-41.45	-43.25	-44.79	-40.46
[illegible].32	-37.11	-35.64	-36.81	-36.47
[illegible].78	-35.64	-36.66	-37.80	

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 11

37.27	-44.23	39.30	-38.72	-40.59
-38.19	-39.66	-45.04	-45.39	-39.36
40.61				

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 12

[illegible].12	-44.08	-40.32	-37.22	-35.53
[illegible].86	-42.93	-42.30	-44.24	-44.09
[illegible]	-44.15			

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 19

47.75	-45.[illegible]	54.03	-49.58	-47.[illegible]
[illegible]	-[illegible].78	[illegible]	54.45	[illegible]
[illegible]	-48.24	46.50	54.67	-49.[illegible]
[illegible]	47.[illegible]	[illegible]	55.31	

[illegible] THIN-ICE [illegible] ANGLE = [illegible]

FREQUENCY = [illegible] GHz NUMBER OF RETURN = [illegible]
[illegible] 40.94 -40.87 40.61 [illegible]
40.36

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 5
-42.12 -43.52 -44.36 -44.32 [illegible]

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = [illegible]
-37.36 -43.76 -48.22 -44.15 [illegible]
-7.61

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = [illegible]
[illegible] -8.00 -8.00 10.00 [illegible]
.00 -5.00 2.00 -3.00 [illegible]
3.00 1.00

FREQUENCY = [illegible] GHz NUMBER OF RETURNS = [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible]

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 8
[illegible] -41.00 -39.58 -39.63 -39.33
[illegible] -37.16 -38.00

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 7
[illegible] -38.76 -38.70 -37.99 -38.20
[illegible] -38.13

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 4
[illegible] 2.00 -2.30 2.50

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 18
[illegible] -17.00 -31.00 -27.00 -23.00
[illegible] -29.00 -17.00 -27.00 -21.00
[illegible] 22.00 22.00 -20.43 -19.00
[illegible] -18.00 -24.87

SITE-R6-TFY INCIDENCE ANGLE = 25.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 12

-37.45	-38.94	-38.46	-37.98	-36.51
-36.49	-38.67	-37.50	-37.05	-41.85
-38.49	-38.52			

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 20

-34.50	-36.35	-36.70	-35.82	-37.50
-35.74	-35.97	-37.41	-39.49	-43.03
-38.72	-36.53	-37.85	-36.22	-35.58
-35.22	-34.71	-35.75	-35.16	-36.93

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 12

-36.21	-37.19	-37.80	-38.12	-37.75
-37.31	-38.68	-39.43	-37.04	-37.53
-36.25	-37.14			

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 15

-32.22	-31.72	-31.50	-31.66	-31.49
-31.50	-31.75	-31.24	-31.16	-31.50
-31.54	-31.47	-31.58	-31.53	-31.44

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 15

-38.29	-50.11	-48.50	-40.25	-39.71
-39.10	-39.64	-48.60	-40.38	-40.82
-39.72	-40.21	-35.65	-36.11	-35.65

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 11

-45.82	-46.58	-46.96	-47.01	-40.30
-39.98	-39.03	-39.85	-44.78	-46.50
-39.39				

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 9

-41.04	-42.65	-41.70	-46.28	-33.60
-38.30	-40.06	-35.73	-38.65	

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 8

-37.92	-37.91	-38.10	-38.62	-40.00
-39.05	-47.66	-48.34		

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 8

-56.57	-60.00	-57.10	-56.98	-56.18
-48.10	-48.10	-36.12		

SITE-R6-THIN-ICE INCIDENCE ANGLE = 25.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 6
-39.58 -40.38 -39.80 -31.78 -42.10
-42.64

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 5
-35.88 -45.16 -47.28 -47.66 -47.50

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 8
-25.99 -34.75 -38.79 -36.32 -29.80
-26.85 -33.40 -29.99

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 6
-52.66 -58.31 -57.00 -56.82 -57.00
-56.70

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 7
-37.80 -38.[illegible] -42.10 -41.28 -48.18
-40.59 -40.[illegible]

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 8
-32.95 -33.13 -32.92 -32.93 -32.97
-32.90 32.86 -32.85

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 7
-47.52 -47.49 -47.00 -42.39 -45.37
-47.58 -47.52

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

SITE-R6-TFY INCIDENCE ANGLE = 38.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 16

-40.85	-40.19	-43.27	-37.44	-39.16
-38.54	-38.51	-38.12	-42.03	-42.06
-43.24	-43.34	-40.29	-42.06	-42.12
-42.52				

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 18

-41.19	-38.38	-38.10	-39.46	-38.96
-40.84	-41.26	-41.70	-41.47	-40.51
-42.12	-39.15	-36.00	-38.72	-39.81
-38.44	-39.04	-38.25		

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 21

-41.90	-43.05	-40.69	-41.51	-40.57
-40.64	-42.68	-49.49	-40.96	-40.19
-43.28	-43.26	-30.34	-38.46	-44.14
-42.55	-40.26	-41.27	-44.02	-41.22
-42.45				

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 17

-35.46	-36.38	-36.29	-36.38	-36.33
-37.04	-36.97	-37.84	-36.77	-36.72
-27.23	-32.57	-32.95	-33.02	-33.17
-33.24	-33.06			

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 12

-21.61	-30.46	-25.65	-16.02	-15.93
-29.83	-15.86	-16.11	-19.21	-31.50
-15.97	-5.68			

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 8

-17.28	-18.87	-40.39	-16.00	5.67
-5.88	2.10	-3.62		

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 7

-13.43	-11.31	-15.98	-15.64	-23.74
-36.59	-25.65			

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 1

-35.64

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 9

-58.62	-54.83	-56.91	-54.93	-54.61
-54.20	-53.52	-52.81	-53.85	

SITE-R6-THIN-ICE INCIDENCE ANGLE = 38.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 3
-43.02 -42.66 -42.86

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 8
-25.65 -25.65 -16.08 1.80 -3.75
-5.69 -16.48 -8.00

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 5
-58.26 -58.14 -57.47 -57.89 -57.75

SITE-R6-TFY-SNOW INCIDENCE ANGLE = 50.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 3
-42.34 -41.98 -42.59

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 7
-40.91 -40.59 -39.75 -39.00 -40.74
-40.75 -40.45

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 7
-44.16 -44.35 -44.22 -43.01 -44.02
-44.35 -44.95

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 5
-37.52 -37.56 -38.12 -39.14 -38.75

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 8
-21.09 -39.89 -7.61 -5.67 -40.17
-27.03 -16.22 -36.92

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 5
2.00 -29.62 -24.44 -7.61 -5.69

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 6
-25.63 -6.51 -13.78 -15.63 -15.86
-10.26

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 9
-7.12 -8.39 0.10 -57.62 -6.42
-13.80 -8.18 -13.58 -18.50

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 9
-51.22 -53.71 -51.63 -51.92 -54.08
-52.51 -53.60 -53.96 -55.20

SITE-R6-MELT-PONDS INCIDENCE ANGLE = 50.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 21

-52.28	-50.08	-51.54	-51.52	-51.82
-50.75	-50.17	-51.39	-51.39	-52.20
-51.49	-52.71	-52.09	-52.19	-51.81
-45.11	-44.80	-44.90	-44.52	-43.74
-44.08				

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 11

-48.80	-49.15	-49.25	-49.46	-50.49
-50.65	-51.59	-48.95	-49.75	-49.54
-49.02				

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 12

-53.45	-54.75	-48.25	-48.64	-45.76
-47.35	-46.71	-47.93	-47.22	-47.19
-46.26	-47.94			

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 5

-33.65	-33.67	-33.70	-33.67	-33.71

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 11

-39.71	-41.84	-42.52	-42.37	-42.90
-43.35	-43.54	-42.87	-43.06	-42.94
-43.33				

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 8

-42.65	-41.48	-43.76	-42.97	-43.78
-44.10	-44.25	-44.83		

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 17

-47.32	-38.54	-50.29	-35.64	-35.65
35.64	-25.65	-50.62	-59.41	-35.65
35.65	-41.00	-25.84	-44.21	-35.66
44.95	-44.24			

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 5

-33.75	-33.03	-33.73	-33.95	-33.86

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 14

-53.23	-55.91	-57.50	-56.82	56.37
-56.42	-54.21	-55.07	-54.87	-58.00
-58.30	-58.55	-57.04	-58.41	

SITE-R6-NEW-ICE INCIDENCE ANGLE = 50.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 6
-45.46 -45.74 -45.48 -45.34 -45.53
-45.46

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 5
-45.17 -45.31 -45.43 -45.55 -45.43

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 10
-51.57 -51.79 -51.81 -51.44 -50.46
-50.35 -50.31 -50.25 -50.19 -49.85

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 7
-33.08 -34.47 -47.03 -46.02 -46.27
-44.65 -44.21

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 4
-43.04 -44.06 -44.05 -43.90

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 6
35.95 -50.51 -35.65 -25.67 -25.70
-15.65

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 9
-41.58 -40.87 -38.24 -25.67 -42.81
-43.20 -46.17 -43.82 -43.99

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 7
-58.25 -58.90 -58.96 -58.95 -59.01
-58.94 -59.26

SITE-R7-P1 INCIDENCE ANGLE = 12.5

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 15

-35.96	-37.96	-34.00	-34.79	-28.50
-35.76	-34.82	-36.00	-34.29	-35.23
-34.14	-33.75	-31.21	-35.85	-33.08

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 9

-31.75	-32.00	-34.04	-32.36	-32.51
-32.58	-33.65	-32.84	-33.65	

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 13

-34.85	-34.82	-33.35	-34.61	-34.31
-35.00	-32.14	-37.69	-35.42	-34.76
-32.57	-35.21	-35.09		

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 13

-33.75	-33.49	-34.76	-35.29	-35.40
-35.58	-35.00	-35.46	-32.85	-35.31
-35.24	-36.83	-36.42		

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 11

-37.74	-37.62	-38.10	-37.38	-36.86
-36.31	-38.15	-37.70	-38.20	-36.91
-36.00				

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 6

-37.75	-38.00	-36.00	-38.75	-39.83
-36.70				

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 8

-37.73	-42.20	-42.11	-42.75	-41.00
-40.20	-40.83	-39.00		

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 6

-47.20	-46.71	-47.27	-46.37	-46.29
-46.80				

SITE-R7-P1 INCIDENCE ANGLE = 12.5

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 4
-34.27 -35.96 -35.14 -35.80

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 9
-34.16 -36.29 -38.55 -41.00 -39.42
-38.54 -39.80 -36.95 -37.70

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 10
-48.95 -50.20 -47.69 -47.42 -56.85
-48.00 -48.62 -47.60 -47.29 -46.55

SITE-R2-P2-RUBBLE INCIDENCE ANGLE = 25.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 14

-34.04	-33.25	-33.43	-35.74	-34.75
-37.05	-34.00	-35.25	-35.68	-37.14
-38.45	-39.36	-41.37	-40.64	

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 10

48.79	-42.38	-41.52	-42.00	-41.96
45.72	-42.11	-45.50	-40.68	-42.90

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 17

50.39	-49.95	-49.19	-48.00	-46.79
45.93	-46.63	-46.79	-46.42	-47.15
49.00	-45.30	-46.80	-50.91	-48.25
46.97	-47.35			

SITE-R7-P1-RUBBLE INCIDENCE ANGLE = 25.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 21

-34.65	-36.62	-36.99	-40.69	-37.75
-36.54	-37.78	-37.57	-36.87	-36.46
-37.50	-37.52	-36.45	-39.28	-37.93
-36.75	-38.42	-37.16	-38.07	-38.24
-38.08				

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 9

-35.95	-35.68	-35.46	-35.35	-37.93
-36.18	-36.47	-36.00	-35.99	

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 12

-35.72	-36.15	-35.95	-36.46	-36.75
-36.50	-37.79	-36.75	-35.36	-42.70
-37.16	-40.86			

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 7

-37.86	-40.89	-37.91	-37.85	-37.93
-38.48	-38.40			

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 15

-37.02	-37.33	-39.86	-37.06	-39.83
-36.15	-38.55	-37.45	-38.36	-38.42
-38.31	-35.64	-37.88	-37.34	-38.95

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 13

-40.11	-40.22	-40.23	-41.05	-39.14
-39.50	-39.13	-38.02	-38.12	-37.21
-38.61	-37.90	-38.06		

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 13

-40.50	-41.10	-39.86	-37.95	-40.04
-38.41	-40.00	-39.38	-39.35	-39.00
-38.94	-38.45	-40.36		

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 10

-40.45	-41.68	-42.49	-42.01	-42.50
-41.97	-44.11	-41.82	-43.12	-42.72

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 17

-47.11	-47.25	-46.00	-48.18	-47.86
-48.37	-47.25	-48.89	-47.85	-49.15
-49.70	-48.95	-48.35	-47.32	-46.11
-48.20	-47.32			

SITE-R7-P1 INCIDENCE ANGLE = 38.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 18

-40.19	-38.65	-40.97	-39.29	-40.01
-40.34	-39.58	-39.69	-40.47	-38.69
-39.06	-41.29	-37.97	-41.69	-40.13
-43.69	-37.73	-39.65		

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 20

-36.15	-39.65	-35.59	-40.78	-34.93
-39.34	-36.15	-39.46	-36.91	-39.07
-35.25	-39.71	-36.50	-40.17	-34.93
-39.75	-37.49	-37.40	-38.97	-38.35

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 10

-39.32	-39.82	-39.00	-39.42	-39.00
-43.25	-41.23	-44.61	-38.75	-37.37

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 10

-43.05	-42.78	-40.75	-39.90	-40.05
-39.97	-40.24	-39.92	-40.27	-39.50

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 14

-40.86	-40.96	-41.44	-41.33	-41.89
-41.37	-43.75	-45.76	-41.52	-43.07
-40.96	-44.15	-43.58	-47.82	

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 14

-45.42	-45.01	-43.29	-43.48	-39.37
-43.00	-45.00	-43.85	-45.13	-43.91
-43.46	-43.50	-42.96	-46.84	

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 12

-45.14	-41.55	-40.87	-41.07	-42.50
-41.25	-40.43	-42.55	-42.94	-41.87
-41.73	-41.05			

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 10

-39.11	-42.04	-46.24	-43.64	-43.93
-44.85	-43.47	-43.96	-43.87	-42.85

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 22

-49.20	-48.75	-48.60	-48.37	-46.35
-47.34	-49.60	-48.85	-48.69	-48.97
-47.91	-49.62	-49.64	-49.27	-50.85
-50.96	-49.30	-48.31	-48.16	-48.70
-48.57	-48.47			

SITE-R2-P2-RUBBLE INCIDENCE ANGLE = 38.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 14

35.19	-36.38	-37.37	-40.97	-37.05
-38.37	-39.23	-40.53	-38.90	-39.00
-38.92	-41.69	-42.50	-40.79	

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 14

-43.22	-45.78	-42.24	-42.71	-42.88
-42.32	-37.51	-38.06	-43.37	-36.07
-42.53	-37.34	-37.95	-40.00	

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 9

-50.21	-50.00	-50.16	-51.11	-49.57
-49.37	-52.16	-51.64	-52.85	

SITE-R7-P1 INCIDENCE ANGLE = 50.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 15

-42.78	-40.92	-40.87	-41.39	-40.21
-40.33	-42.50	-42.60	-40.94	-42.46
-40.84	-43.94	-41.44	-41.92	-40.56

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 11

-40.50	-40.24	-39.59	-40.12	-44.53
-39.92	-40.68	-38.84	-39.72	-40.10
-41.69				

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 11

-40.82	-40.62	-42.75	-41.79	-42.22
-42.27	-39.71	-43.40	-40.22	-40.99
-40.04				

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 12

-34.95	-35.06	-34.96	-34.73	-35.71
-35.73	-35.54	-34.07	-35.04	-34.63
-34.99	-34.95			

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 11

-43.38	-43.34	-41.90	-44.04	-44.85
-51.77	-46.31	-46.35	-44.11	-48.66
-44.75				

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 15

-42.21	-42.75	-42.89	-43.56	-43.35
-44.10	-44.00	-43.85	-42.75	-47.00
-37.50	-45.88	-43.91	-45.40	-43.04

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 16

-47.08	-37.28	-39.09	-42.25	-47.27
-41.98	-47.97	-42.27	-47.61	-42.90
-45.90	-42.75	-45.37	-42.84	-52.16
-44.07				

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 14

-44.35	-45.58	-46.79	-47.05	-45.32
-46.19	-45.18	-45.47	-45.35	-45.35
-43.85	-44.91	-46.28	-44.11	

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 18

-51.04	-54.21	-51.85	-54.50	-50.27
-57.06	-50.91	-53.05	-50.75	-54.06
-50.96	-57.39	-51.50	-55.70	-52.08
-53.10	-53.85	-52.42		

SITE-R8-P1 INCIDENCE ANGLE = 12.5

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 39

-39.94	-38.63	-35.37	-38.07	-38.46
-38.95	-35.26	-37.04	-39.76	-37.90
-37.60	-38.45	-37.14	-39.52	-36.90
-37.80	-36.95	-37.80	-39.90	-37.08
-38.01	-36.05	-37.50	-36.75	-35.15
-39.96	-37.22	-37.50	-36.85	-36.57
-39.05	-35.05	-38.46	-35.26	-39.33
-37.16	-38.00	-38.65	-37.83	

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 15

-36.15	-34.59	-36.34	-36.55	-35.83
-33.09	-36.11	-35.15	-37.15	-34.17
-34.23	-36.09	-34.15	-36.54	-37.29

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 4

-38.75	-41.47	-41.39	-41.86

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 4

-32.47	-32.51	-32.73	-32.57

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 8

-49.15	-49.57	-50.51	-48.45	-50.65
-48.75	-50.74	-49.18		

SITE-R8-P1 INCIDENCE ANGLE = 25.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 35

-40.21	-39.63	-39.64	-41.45	-42.54
-40.74	-41.30	-41.13	-40.95	-41.26
-41.24	-41.63	-42.17	-42.50	-41.60
-43.25	-43.50	-43.85	-41.60	-42.23
-43.15	-40.08	-41.60	-41.25	-41.50
-41.22	-41.90	-40.77	-40.99	-40.87
-40.18	-40.61	-40.37	-40.32	-41.73

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 30

-38.85	-39.15	-37.64	-38.15	-38.96
-38.46	-40.29	-42.15	-38.52	-41.60
-42.70	-39.50	-41.99	-42.50	-40.99
-39.34	-40.11	-38.34	-40.50	-39.09
-40.48	-39.80	-38.17	-39.34	-36.60
-38.58	-39.29	-38.29	-40.53	-37.05

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 46

-42.20	-41.34	-43.37	-42.85	-42.49
-42.75	-42.29	-43.13	-41.16	-43.46
-43.44	-41.42	-36.75	-41.94	-45.45
-41.11	-45.25	-39.72	-44.20	-43.34
-42.38	-42.33	-41.90	-44.90	-41.42
-41.08	-42.47	-42.97	-40.54	-43.48
-42.21	-44.15	-41.79	-43.56	-41.20
-41.25	-39.85	-40.20	-42.77	-40.69
-43.30	-40.40	-42.50	-41.05	-42.48
-40.48				

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 33

-36.86	-39.97	-37.10	-41.20	-37.16
-37.55	-37.50	-40.25	-37.25	-40.02
-37.71	-40.00	-37.75	-38.96	-38.40
-38.41	-38.75	-34.39	-33.14	-32.95
-34.20	-33.34	-34.55	-33.20	-34.27
-33.48	-34.16	-33.54	-33.96	-33.64
-33.82	-33.32	-34.25		

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 25

-53.61	-50.45	-52.45	-53.28	-52.95
-51.16	-52.97	-53.74	-53.65	-53.75
-53.32	-52.85	-52.86	-52.89	-54.30
-53.39	-51.42	-52.76	-52.47	-52.26
-52.29	-52.48	-53.10	-52.74	-52.55

SITE-RB-P1 INCIDENCE ANGLE = 25.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 38

-43.50	-41.36	-43.35	-41.73	-44.30
-43.78	-42.33	-42.45	-42.55	-40.39
-44.55	-42.08	-44.95	-41.10	-40.50
-41.55	-42.18	-42.20	-41.07	-41.87
-40.56	-42.64	-41.55	-40.39	-40.18
-42.11	-37.42	-40.59	-7.25	-42.98
-38.65	-43.83	-43.74	-41.00	-39.46
-43.24	-41.75	-42.20		

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 42

-40.15	-39.82	-40.15	-40.45	-37.17
-40.05	-39.15	-40.42	-37.61	-40.40
-40.00	-40.48	-40.63	-39.95	-39.95
-38.57	-38.54	-39.15	-40.15	-39.25
-39.33	-39.08	-39.34	-38.71	-39.75
-38.73	-38.16	-41.94	-40.82	-44.00
-38.75	-42.59	-40.00	-41.13	-40.55
-43.20	-40.31	-39.00	-42.10	-41.85
-40.96	-42.21			

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 21

-45.03	-41.92	-45.14	-43.34	-45.42
-46.13	-46.63	-45.73	-44.26	-46.33
-44.43	-46.77	-45.52	-45.18	-47.52
-44.50	-41.82	-43.55	-40.37	-42.16
-47.89				

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 25

-35.37	-37.15	-35.87	-37.33	-36.21
-37.24	-36.39	-36.55	-36.00	-37.25
-36.15	-36.62	-36.75	-36.32	-36.87
-37.83	-35.16	-35.27	-35.47	-35.52
-35.31	-35.52	-35.38	-35.74	-35.78

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 16

-52.35	-53.64	-51.16	-53.47	-50.48
-52.95	-50.39	-50.81	-51.33	-49.80
-52.79	-50.59	-53.46	-52.32	-54.64
-53.60				

SITE-R8-P1 INCIDENCE ANGLE = 38.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 27

-40.90	-42.74	-41.95	-42.65	-44.31
-41.55	-44.30	-42.49	-43.06	-42.82
-41.52	-43.11	-42.54	-43.65	-42.22
-42.37	-42.10	-43.27	-42.90	-43.47
-43.00	-43.44	-43.98	-42.30	-42.04
-42.41	-43.86			

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 36

-40.32	-37.23	-41.07	-40.30	-40.82
-40.11	-41.00	-40.75	-41.00	-40.99
-41.68	-41.34	-40.58	-40.96	-40.65
-40.89	-40.95	-39.75	-41.20	-40.10
-48.18	-39.22	-25.63	-39.97	-40.29
-40.87	-39.97	-39.87	-41.16	-40.88
-41.48	-40.96	-41.15	-40.67	-41.09
-39.67				

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 23

-46.54	-48.27	-42.48	-43.38	-43.48
-44.53	-45.04	-45.01	-43.97	-44.37
-45.00	-44.32	-44.84	-42.49	-44.43
-46.60	-44.45	-46.37	-44.30	-44.69
-45.00	-46.37	-44.69		

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 32

-38.82	-39.75	-38.72	-40.25	-38.25
-39.48	-38.11	-39.51	-37.90	-39.57
-38.10	-38.75	-38.61	-38.23	-38.75
-38.76	-42.10	-41.90	-42.21	-42.44
-41.74	-41.91	-41.35	-42.08	-40.99
-41.70	-40.27	-41.69	-35.62	-41.28
-41.74	-41.55			

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 16

-53.77	-54.26	-54.22	-53.39	-55.16
-53.74	-54.53	-53.85	-54.88	-54.92
-55.01	-53.97	-54.91	-54.56	-55.20
-53.08				

SITE-R8-P1 INCIDENCE ANGLE = 38.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 19

-37.98	-26.17	-40.33	-40.81	-41.52
-40.25	-42.00	-39.61	-43.44	-41.82
-43.26	-42.04	-42.74	-42.98	-42.54
-43.54	-41.00	-41.79	-42.50	

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 27

-44.18	-42.58	-45.15	-42.96	-44.45
-44.75	-43.87	-47.05	-44.13	-46.75
-45.14	-45.12	-42.51	-41.63	-42.19
-39.79	-41.74	-41.72	-42.25	-41.61
-41.79	-41.47	-41.85	-40.90	-42.85
-41.44	-40.78			

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 29

-44.32	-44.65	-46.97	-47.08	-47.62
-45.27	-46.91	-48.22	-46.15	-47.36
-44.95	-44.57	-46.26	-39.66	-35.67
-39.62	-35.93	-39.49	-36.47	-30.85
-36.41	-38.97	-37.55	-38.71	-37.68
-38.39	-37.92	-38.52	-38.10	

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 38

-39.87	-46.75	-40.86	-48.60	-5.00
-49.03	-4.00	-49.41	-3.00	-35.62
-2.00	-45.62	-0.01	-48.17	-35.62
-26.97	-40.32	-41.61	-27.33	-42.91
-36.26	-43.85	-43.52	-42.57	-42.19
-42.93	-41.67	-40.80	-43.32	-39.00
-42.96	-41.63	-43.00	-42.20	-42.35
-43.06	-41.80	-43.33		

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 12

-51.84	-52.54	-51.00	-51.38	-53.94
-52.45	-49.96	-53.50	-54.63	-52.84
-52.26	-51.56			

SITE-R8-P1 INCIDENCE ANGLE = 50.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 22

-47.68	-48.90	-48.68	-49.02	-51.05
-50.04	-51.23	-50.72	-50.32	-48.19
-49.23	-47.88	-49.24	-50.47	-49.85
-49.30	-50.25	-59.46	-48.21	-47.94
-49.04	-48.77			

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 26

-44.57	-44.72	-45.27	-45.14	-44.20
-48.81	-47.41	-47.86	-48.29	-47.58
-47.42	-47.49	-46.93	-47.83	-47.61
-48.78	-47.10	-48.43	-46.26	-48.65
-48.49	-48.79	-47.92	-49.01	-50.10
-47.98				

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 56

-45.40	-44.55	-46.62	-45.27	-46.76
-46.40	-46.75	-46.38	-46.95	-46.35
-46.65	-46.92	-47.31	-46.15	-47.72
-46.62	-45.48	-45.86	-45.41	-45.16
-45.32	-44.61	-44.24	-44.52	-44.30
-46.52	-44.40	-47.65	-44.05	-47.29
-48.12	-42.25	-47.81	-47.40	-48.01
-47.93	-47.68	-48.35	-47.89	-48.83
-47.94	-48.00	-48.55	-49.35	-50.49
-45.48	-45.82	-46.77	-46.82	-46.21
-48.39	-46.30	-49.34	-47.29	-47.31
-46.86				

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 11

-35.24	-35.03	-35.22	-35.12	-35.08
-35.14	-35.17	-35.16	-35.14	-35.21
-35.25				

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 6

-58.49	-58.82	-58.06	-58.37	-57.34
-56.75				

SITE-R8-P1 INCIDENCE ANGLE = 50.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 26

-46.12	-46.72	-44.70	-47.28	-45.19
-45.81	-46.15	-45.69	-46.19	-45.08
-47.32	-48.39	-47.00	-48.43	-47.33
-46.89	-46.24	-45.98	-45.85	-46.36
-47.18	-48.68	-45.11	-47.18	-45.65
-46.70				

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 20

-44.95	-45.28	-45.18	-45.48	-45.40
-46.19	-43.90	-45.15	-44.20	-44.91
-44.50	-44.67	-43.69	-43.68	-44.15
-45.45	-45.50	-44.47	-45.08	-43.35

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 18

-47.72	-48.33	-46.71	-47.07	-47.65
-47.20	-48.19	-47.20	-48.01	-46.88
-47.04	-46.32	-47.15	-47.09	-47.58
-46.86	-47.61	-47.25		

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 19

-35.85	-35.62	-35.50	-35.48	-35.45
-35.23	-35.10	-35.14	-37.36	-37.00
-36.62	-36.50	-35.86	-36.07	-36.19
-36.23	-36.17	-36.22	-36.15	

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 14

-56.09	-56.49	-57.09	-57.14	-55.92
-57.07	-55.82	-56.99	-56.79	-57.19
-56.41	-56.67	-55.75	-56.05	

SITE-R9-P1 INCIDENCE ANGLE = 0.

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 30

-37.23	-32.15	-31.18	-33.43	-18.57
-33.47	-34.62	-27.80	-35.92	-33.50
-34.28	-32.31	-26.95	-35.15	-31.45
-32.60	-37.18	-34.11	-29.52	-34.20
-35.63	-33.93	-35.70	-33.99	-22.49
-30.50	-19.57	-33.50	-25.32	-27.16

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 22

-30.30	-32.03	-32.12	-30.25	-32.29
-27.29	-31.85	-29.17	-33.06	-33.73
-27.95	-25.98	-33.83	-31.00	-29.49
-29.15	-32.51	-24.16	-16.90	-33.49
-34.15	-34.79			

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 18

-31.55	-23.20	-32.90	-28.72	-32.47
-29.30	-31.67	-36.40	-28.75	-31.76
-33.22	-30.70	-35.74	-31.52	-33.55
-30.69	-28.80	-26.75		

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 25

-32.81	-17.75	-32.65	-32.00	-30.16
-31.98	-32.29	-26.59	-32.58	-31.41
-31.53	-31.67	-31.49	-30.00	-32.48
-33.17	-30.62	-31.40	-32.75	-28.59
-32.43	-33.14	-31.40	-32.16	-28.90

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 21

-33.59	-33.25	-31.75	-34.25	-34.68
-29.76	-27.95	-34.50	-40.00	-37.50
-35.97	-38.64	-34.68	-23.19	-34.95
-33.94	-34.60	-37.69	-34.05	-33.55
-33.25				

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 37

4.66	-34.59	2.91	-32.15	-6.10
-32.11	-0.88	-34.07	-19.57	-32.54
-2.35	-34.35	-5.00	4.55	5.47
3.00	-34.18	-30.68	-29.36	-34.87
-35.40	-34.75	-33.09	-31.51	-31.32
-29.70	-35.14	-34.51	-29.32	-31.52
-30.00	-27.94	-34.29	-14.58	-5.83
-11.69	-30.43			

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 15

2.27	2.56	4.00	-20.00	-18.90
-12.00	-4.93	-17.65	-33.00	-31.66
-36.00	-33.07	-28.00	-35.69	-18.00

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 12

-17.80	-19.47	-18.00	-9.00	-24.93
-21.49	-29.30	-17.55	-31.00	-16.89
-32.56	-17.86			

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 15

-46.39	-41.95	-45.45	-43.13	-43.00
-42.07	-22.24	-44.03	-45.47	-46.03
-35.03	-47.44	-48.35	-47.33	-44.50

SITE-R9-P2-MELTPOOL INCIDENCE ANGLE = 0.

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 10
-16.50 -15.17 -14.39 -13.75 -15.70
-16.01 -14.03 -13.95 -13.29 -14.68

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 7
-9.15 -15.38 -15.07 -15.47 -16.78
-14.85 -14.97

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 5
-27.35 -27.01 -26.48 -27.85 -29.00

SITE-R9-P3-SNOW INCIDENCE ANGLE = 0.

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 15

-35.20	-27.27	-36.15	-33.16	-31.14
-29.47	-36.08	-35.98	-38.18	-32.80
-36.93	-35.40	-35.00	-34.10	-28.75

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 16

-33.24	-35.47	-35.70	-22.87	-38.15
-28.85	-33.16	-33.50	-34.35	-36.12
-37.47	-35.17	-36.26	-34.75	-35.00
-34.05				

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 14

-44.67	-45.21	-42.17	-40.00	-41.85
-37.09	-48.60	-42.40	-47.56	-38.10
-46.70	-41.14	-39.95	-39.04	

SITE-R9-P1 INCIDENCE ANGLE = 12.5

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 25

-38.39	-34.06	-35.00	-37.06	-36.03
-35.81	-37.34	-34.49	-37.58	-38.44
-36.75	-36.09	-34.78	-37.24	-36.10
-38.84	-35.76	-35.12	-36.00	-34.70
-38.50	-36.31	-34.05	-37.06	-35.50

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 16

-33.44	-35.31	-34.51	-35.37	-34.65
-36.50	-34.82	-37.84	-34.12	-36.40
-32.50	-37.36	-35.49	-33.43	-34.99
-32.50				

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 16

-33.21	-35.60	-36.70	-34.10	-37.35
-35.87	-38.70	-34.21	-37.64	-32.50
-38.10	-34.23	-36.76	-33.00	-37.50
-33.80				

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 16

-36.40	-37.08	-37.00	-37.62	-35.47
-35.17	-35.80	-36.00	-36.24	-34.85
-33.29	-38.06	-33.04	-37.85	-34.91
-39.00				

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 31

-39.90	-37.71	-38.49	-14.02	-30.29
-0.01	-36.52	-35.16	-37.78	-36.79
-36.50	-37.05	-37.50	-17.88	-39.29
-36.05	-37.49	-36.68	-37.68	-34.78
-17.00	-21.21	-36.81	-33.87	-29.00
-31.52	-25.63	-20.94	-37.80	-38.60
-35.40				

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 24

-38.36	-35.97	-37.40	-36.40	-35.75
-35.81	-34.40	-33.05	-33.71	-34.80
-30.59	-37.00	-31.58	-34.85	-26.20
-32.30	-26.58	-29.82	-29.00	-31.93
-31.53	-29.58	-36.76	-34.05	

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 19

-21.72	-30.11	-35.38	-37.22	-37.00
-35.51	-36.65	-34.45	-34.92	-37.09
-35.52	-36.75	-38.40	-37.50	-32.24
-34.20	-35.75	-36.10	-36.85	

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 20

-35.92	-36.71	-37.15	-37.85	-36.42
-36.00	-35.54	-38.47	-36.95	-36.12
-36.73	-35.78	-36.50	-36.15	-36.52
-34.20	-35.55	-36.47	-36.09	-35.34

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 24

-47.31	-57.99	-44.79	-55.24	-48.40
-50.78	-47.81	-49.15	-47.04	-48.60
-47.00	-48.85	-45.62	-48.24	-46.32
-48.50	-57.36	-47.37	-47.77	-49.02
-48.50	-45.91	-46.61	-49.83	

SITE-R9-P1 INCIDENCE ANGLE = 25.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 36

-38.66	-39.01	-37.17	-38.49	-36.81
-38.21	-36.42	-38.31	-36.66	-39.13
-37.73	-35.40	-38.02	-38.16	-39.43
-38.02	-39.24	-37.75	-37.20	-38.75
-39.29	-38.03	-39.01	-39.75	-38.10
-41.22	-37.36	-38.16	-38.15	-38.67
-38.14	-39.07	-38.71	-38.97	-37.49
-38.06				

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 13

-35.48	-35.58	-37.16	-37.08	-36.15
-34.34	-35.47	-34.65	-33.97	-38.54
-35.24	-37.75	-34.52		

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 15

-33.97	-38.45	-32.75	-39.43	-40.26
-38.08	-39.34	-39.61	-40.53	-40.16
-42.40	-38.76	-40.83	-37.62	-40.87

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 14

-33.09	-32.42	-33.07	-34.92	-32.52
-32.41	-32.61	-32.61	-32.88	-32.71
-32.67	-32.58	-32.84	-32.53	

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 27

-38.36	-39.76	-39.30	-37.54	-39.69
-38.75	-38.80	-39.05	-37.81	-42.33
-39.54	-43.15	-37.97	-38.14	-37.97
-38.48	-43.60	-41.85	-38.38	-39.38
-37.49	-39.40	-38.33	-38.51	-37.09
-38.75	-36.59			

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 10

-35.24	-37.10	-36.60	-37.61	-37.02
-36.99	-37.21	-37.15	-37.95	-40.29

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 14

-36.11	-38.08	-37.05	-44.40	-40.32
-39.68	-40.88	-38.94	-38.78	-37.97
-41.62	-40.39	-40.20	-41.06	

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 10

-35.62	-34.84	-33.92	-34.45	-34.31
-34.04	-34.18	-34.96	-34.66	-35.15

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 19

-44.54	-44.08	-49.95	-43.55	-49.44
-45.69	-50.07	-44.99	-47.39	-44.59
-48.48	-45.39	-47.38	-46.57	-46.21
-48.10	-50.14	-47.05	-48.95	

SITE-R9-NOT-GIVEN INCIDENCE ANGLE = 25.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 39

-47.95	-37.18	-48.74	-37.05	-41.62
-38.08	-49.26	-36.95	-39.20	-37.65
-39.76	-37.60	-39.34	-38.01	-41.02
-40.05	-40.52	-36.55	-38.87	-38.75
-37.43	-38.35	-37.05	-43.29	-37.30
-42.84	-37.58	-35.89	-40.53	-40.30
-41.67	-40.39	-37.24	-39.88	-37.17
-38.24	-38.97	-38.79	-37.85	

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 12

-37.70	-37.87	-38.27	-37.83	-37.49
-39.23	-36.73	-36.69	-37.00	-36.50
-37.28	-38.01			

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 17

-35.51	-36.56	-39.67	-37.85	-38.50
-35.54	-43.04	-38.74	-43.48	-39.25
-42.55	-40.20	-39.75	-41.65	-40.39
-42.62	-42.01			

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 9

-35.16	-34.50	-33.93	-34.31	-32.68
-33.02	-33.33	-34.11	-34.15	

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 15

-40.17	-43.24	-43.84	-37.40	-26.21
-38.06	-21.40	-37.11	-38.96	-37.37
-37.40	-39.99	-38.60	-38.24	-40.35

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 8

-38.60	-34.50	-33.55	-34.17	-34.20
-35.60	-36.60	-34.34		

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 9

-36.15	-36.50	-37.19	-37.98	-37.75
-38.24	-38.16	-41.55	-38.49	

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 6

-34.50	-35.36	-35.23	-33.94	-34.15
-33.80				

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 31

-47.90	-47.45	-49.96	-48.46	-50.46
-47.50	-49.92	-45.52	-50.13	-47.60
-57.45	-48.54	-57.86	-47.60	-50.00
-48.15	-46.90	-47.08	-47.45	-47.49
-48.66	-47.68	-45.46	-47.23	-46.67
-44.15	-47.31	-48.72	-47.01	-46.25
-47.15				

SITE-R9-NOT-GIVEN INCIDENCE ANGLE = 38.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 22

-40.77	-41.05	-42.49	-40.21	-40.89
-40.05	-40.07	-41.60	-41.28	-21.67
-40.09	-40.05	-43.50	-41.29	-41.37
-42.55	-42.96	-41.94	-41.67	-42.40
-42.35	-44.10			

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 9

-36.08	-37.49	-37.77	-38.50	-42.32
-38.35	-39.72	-40.49	-41.16	

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 16

-45.03	-42.78	-42.80	-45.96	-44.04
-43.48	-41.15	-42.19	-42.39	-43.65
-44.89	-40.23	-39.76	-41.05	-42.47
-43.47				

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 10

-36.29	-36.56	-36.17	-36.09	-35.93
-35.86	-35.84	-35.55	-35.83	-35.67

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 26

-43.05	-44.04	-43.89	-40.60	-40.20
-43.07	-42.40	-42.52	-43.03	-44.75
-44.68	-42.49	-44.95	-44.52	-45.71
-41.40	-45.38	-38.32	-42.81	-41.33
-42.49	-40.62	-44.11	-41.47	-41.31
42.80				

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 12

-42.51	-41.91	-40.32	-40.92	-44.37
-39.10	-40.13	-41.65	-38.46	-44.43
-40.42	-40.00			

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 7

-44.29	-42.43	-42.75	-44.19	-41.05
-46.35	-48.48			

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 16

-44.26	-43.82	-45.41	-46.02	-44.70
-45.84	-44.16	-46.38	-44.04	-46.60
-44.68	-45.10	-43.54	-44.26	-45.01
-45.49				

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 20

-49.20	-47.40	-48.20	-49.15	-47.13
-49.80	-49.60	-46.25	-47.35	-51.74
-52.87	-53.45	-54.00	-52.11	-51.65
-50.80	-51.25	-51.97	-53.10	-51.26

SITE-R9-NOT-GIVEN INCIDENCE ANGLE = 50.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 23

-47.46	-44.37	-44.86	-45.46	-45.22
-45.85	-44.27	-44.58	-43.69	-43.61
-46.09	-45.26	-40.45	-46.22	-46.15
-44.91	-45.30	-45.75	-45.47	-45.41
-45.35	-45.69	-46.30		

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 10

-39.27	-41.02	-41.30	-41.28	-42.01
-42.10	-41.39	-41.22	-40.77	-40.99

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 10

-45.15	-45.90	-45.75	-45.70	-46.50
-45.48	-43.55	-46.77	-44.70	-46.78

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 10

-35.86	-35.40	-34.96	-34.56	-35.29
-35.33	-35.38	-35.69	-35.33	-34.88

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 23

-45.04	-46.72	-46.88	-50.78	-50.49
-49.31	-58.25	-52.15	-51.17	-50.47
-48.07	-37.06	-47.35	-48.11	-45.35
-47.80	-48.10	-48.48	-47.65	-46.50
-46.50	-44.55	-46.24		

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 10

-46.75	-46.66	-46.50	-43.97	-44.76
-45.10	-45.64	-46.36	-46.60	-46.03

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 13

-46.43	-46.30	-53.17	-47.95	-52.64
-48.95	-56.55	-48.57	-50.55	-47.75
-48.27	-49.10	-48.03		

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 17

-51.10	-50.39	-51.32	-50.76	-49.99
-49.23	-48.27	-50.80	-48.39	-48.95
-47.40	-48.32	-49.26	-51.23	-51.13
-48.36	-50.34			

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 24

-53.15	-53.01	-52.85	-54.01	-53.10
-52.40	-53.90	-54.84	-53.50	-53.70
-54.70	-52.78	-53.96	-51.32	-52.57
-52.41	-53.95	-52.07	-52.08	-50.78
-51.46	-51.65	-51.01	-50.71	

INCIDENCE ANGLE= 0.

SITE-R10-P1

NUMBER OF RETURNS: 23 FREQUENCY: 9 GHZ

33.10 33.40 36.73 30.48 27.70

28.80 29.45 28.46 31.40 30.99

34.39 32.97 33.00 30.76 32.15

31.85 31.53 28.32 28.35 30.76

31.93 32.12 31.35

NUMBER OF RETURNS: 4 FREQUENCY: 10 GHZ

30.52 30.80 26.94 32.57 27.70

30.52 30.80 26.94 32.57

NUMBER OF RETURNS: 10 FREQUENCY: 11 GHZ

27.68 25.84 32.58 31.76 31.71

27.12 30.49 30.23 27.45 30.20

NUMBER OF RETURNS: 16 FREQUENCY: 12 GHZ

29.86 30.72 31.74 31.11 29.56

27.76 32.40 31.78 32.10 31.60

27.64 28.53 30.63 28.76 27.95

30.11

NUMBER OF RETURNS: 16 FREQUENCY: 13 GHZ

32.00 30.16 32.69 28.48 33.49

33.96 37.06 34.07 34.49 34.24

37.41 34.05 35.46 34.07 33.78

37.90

NUMBER OF RETURNS: 16 FREQUENCY: 14 GHZ

37.28 32.26 30.49 37.30 33.90

37.86 35.17 29.40 34.90 34.17

30.18 34.38 34.80 36.75 35.72

36.88

NUMBER OF RETURNS: 10 FREQUENCY: 15 GHZ

37.01 36.66 34.11 33.31 30.65

40.34 37.55 36.31 35.50 37.84

NUMBER OF RETURNS: 19 FREQUENCY: 16 GHZ

37.06 41.12 41.20 37.76 39.14

43.34 41.51 38.54 38.25 36.38

35.85 41.30 40.80 41.76 40.62

39.72 39.95 42.69 38.95

NUMBER OF RETURNS: 13 FREQUENCY: 17 GHZ

46.30 42.15 47.11 45.41 45.71

46.34 38.79 45.16 41.10 47.94

44.25 45.56 43.32 46.21 47.50

INCIDENCE ANGLE= 12.5

SITE-R10-P1

NUMBER OF RETURNS: 31 FREQUENCY: 9 GHZ

36.55 31.17 37.63 33.11 37.21

34.80 37.20 35.82 36.80 37.81

37.15 36.26 36.78 38.50 38.71

37.00 38.07 37.25 33.14 32.80

34.74 33.78 35.48 33.25 35.49

37.92 34.92 36.97 34.15 33.95

36.70

NUMBER OF RETURNS: 11 FREQUENCY: 10 GHZ

32.10 31.24 34.67 34.95 35.48

35.49 35.00 33.61 33.44 35.84

34.77

NUMBER OF RETURNS: 25 FREQUENCY: 11 GHZ

33.10 31.98 34.24 32.33 30.90

33.11 34.00 32.50 30.90 34.11

33.28 33.95 37.30 33.90 33.81

35.72 35.73 34.87 34.62 34.21

36.34 35.24 34.17 34.21 33.89

NUMBER OF RETURNS: 19 FREQUENCY: 12 GHZ

31.24 31.27 31.91 31.16 33.11

31.90 32.18 31.18 31.77 32.59

30.91 32.17 30.58 31.53 30.92

31.06 30.28 31.27 30.40

NUMBER OF RETURNS: 20 FREQUENCY: 13 GHZ

37.54 33.24 36.11 38.52 37.93

40.34 38.15 36.85 37.84 39.78

37.76 36.52 36.75 37.22 36.86

39.23 39.53 37.97 37.86 38.30

NUMBER OF RETURNS: 3 FREQUENCY: 14 GHZ

39.69 39.02 39.62

NUMBER OF RETURNS: 8 FREQUENCY: 15 GHZ

NUMBER OF RETURNS: 20 FREQUENCY: 16 GHZ

42.86 38.90 43.56 44.06 41.28

43.32 44.26 42.32 43.09 36.39

42.00 43.01 42.85 44.50 42.25

43.35 43.10 44.27 41.74 43.78

NUMBER OF RETURNS: 22 FREQUENCY: 17 GHZ

46.30 47.11 49.20 47.24 48.35

46.47 48.15 47.29 46.86 47.68

47.85 47.40 48.68 49.33 48.15

47.25 48.05 49.40 49.29 51.15

49.52 50.25

INCIDENCE ANGLE= 25.0

SITE-R10-P1

NUMBER OF RETURNS: 24 FREQUENCY: 9 GHZ

39.27 35.12 38.17 36.30 38.80

37.05 38.78 38.33 39.24 38.97

37.81 37.66 38.25 39.41 39.46

40.72 38.37 41.40 37.76 39.22

27.50 27.84 36.04 39.53

NUMBER OF RETURNS: 14 FREQUENCY: 10 GHZ

37.34 37.16 37.27 38.97 36.42

38.18 38.80 37.06 38.50 35.85

37.14 37.62 38.95 38.14

NUMBER OF RETURNS: 0 FREQUENCY: 11 GHZ
NUMBER OF RETURNS: 0 FREQUENCY: 12 GHZ
NUMBER OF RETURNS: 19 FREQUENCY: 13 GHZ

39.38 37.60 39.15 35.90 36.11

36.25 36.80 43.13 42.02 41.27

41.89 39.26 45.02 39.42 40.75

39.77 41.52 21.60 39.57

NUMBER OF RETURNS: 0 FREQUENCY: 14 GHZ
NUMBER OF RETURNS: 0 FREQUENCY: 15 GHZ
NUMBER OF RETURNS: 0 FREQUENCY: 16 GHZ
NUMBER OF RETURNS: 23 FREQUENCY: 17 GHZ

48.47 46.11 46.18 47.35 44.88

48.52 47.15 46.47 48.93 47.35

46.75 46.60 46.47 48.36 46.98

47.20 48.89 48.12 46.75 47.86

44.93 47.79 46.15

INCIDENCE ANGLE= 38.0

SITE-R10-P1

NUMBER OF RETURNS: 16 FREQUENCY: 9 GHZ

38.84 40.54 38.92 41.44 39.06

40.54 38.75 39.26 38.90 41.70

39.95 42.74 40.65 42.50 38.72

42.41

NUMBER OF RETURNS: 14 FREQUENCY: 10 GHZ

41.62 40.40 37.71 41.11 37.60

41.18 39.40 40.71 40.59 38.96

39.95 42.98 39.75 39.80

NUMBER OF RETURNS: 0 FREQUENCY: 11 GHZ
NUMBER OF RETURNS: 0 FREQUENCY: 12 GHZ
NUMBER OF RETURNS: 9 FREQUENCY: 13 GHZ

41.05 37.78 40.00 40.16 38.70

39.43 39.15 42.02 40.27

NUMBER OF RETURNS: 16 FREQUENCY: 14 GHZ

43.75 45.44 43.67 45.17 44.30

44.54 43.85 44.30 44.80 46.18

43.52 45.38 45.27 46.46 45.00

48.49

NUMBER OF RETURNS: 15 FREQUENCY: 15 GHZ

47.57 43.53 45.76 44.24 43.24

45.10 43.11 46.68 46.10 45.24

44.07 43.87 42.00 42.05 44.93

NUMBER OF RETURNS: 9 FREQUENCY: 16 GHZ

45.01 46.58 44.60 45.22 43.84

45.37 44.74 43.87 45.02

NUMBER OF RETURNS: 0 FREQUENCY: 17 GHZ

INCIDENCE ANGLE= 50.0

SITE-R10-P1

NUMBER OF RETURNS: 36 FREQUENCY: 9 GHZ

42.74 44.35 43.57 44.94 43.10

44.47 43.48 43.50 44.75 42.85

45.78 42.69 43.08 43.18 44.87

43.20 43.55 42.22 44.16 43.51

43.45 43.65 43.17 43.89 42.41

41.65 43.09 41.16 44.03 43.15

43.07 41.94 44.50 43.90 42.30

42.62

NUMBER OF RETURNS: 18 FREQUENCY: 10 GHZ

40.61 43.37 42.20 40.65 42.80

42.85 41.35 41.90 42.32 41.14

42.57 44.80 42.76 45.17 41.24

43.11 42.20 42.28

NUMBER OF RETURNS: 16 FREQUENCY: 11 GHZ

39.84 44.54 39.40 41.84 42.50

40.72 39.24 43.81 40.20 46.50

41.08 45.80 39.96 39.73 39.24

41.80

NUMBER OF RETURNS: 8 FREQUENCY: 12 GHZ

34.50 34.39 34.26 34.25 34.50

34.60 34.54 34.74

NUMBER OF RETURNS: 8 FREQUENCY: 13 GHZ

47.67 48.28 48.13 43.14 44.50

45.04 44.36 44.42

NUMBER OF RETURNS: 16 FREQUENCY: 14 GHZ

45.36 42.70 43.90 42.88 44.20

43.50 45.43 44.29 43.11 45.30

43.59 44.10 43.27 44.49 45.69

44.25

NUMBER OF RETURNS: 16 FREQUENCY: 15 GHZ

43.60 44.02 44.46 44.52 44.14

43.09 45.52 42.77 44.44 43.12

45.22 44.14 46.01 45.15 43.93

44.89

NUMBER OF RETURNS: 8 FREQUENCY: 16 GHZ

47.60 47.48 48.42 43.36 43.24

27.15 48.24 27.62

NUMBER OF RETURNS: 14 FREQUENCY: 17 GHZ

49.96 47.80 51.26 46.15 51.15

50.70 50.20 48.61 48.14 50.69

49.93 50.45 49.26 48.56

INCIDENCE ANGLE= 0.

SITE-R10-P2

NUMBER OF RETURNS: 15 FREQUENCY: 9 GHZ

38.05 31.29 32.76 34.14 34.50

33.44 29.15 30.39 28.73 34.60

30.79 28.63 30.39 29.90 29.49

NUMBER OF RETURNS: 13 FREQUENCY: 10 GHZ

30.40 29.12 31.79 33.14 28.75

30.68 30.63 29.82 37.06 28.72

31.23 30.66 29.25

NUMBER OF RETURNS: 10 FREQUENCY: 11 GHZ

31.34 32.48 34.00 32.62 34.20

31.73 32.43 34.50 28.26 28.75

NUMBER OF RETURNS: 11 FREQUENCY: 12 GHZ

29.15 30.15 29.01 29.00 29.84

31.57 20.52 31.45 29.45 27.16

29.12

NUMBER OF RETURNS: 21 FREQUENCY: 13 GHZ

34.75 33.04 33.44 36.51 34.28

33.26 35.70 30.45 31.40 36.42

31.75 36.50 28.86 31.10 36.89

30.64 33.97 32.12 29.80 33.50

31.75

NUMBER OF RETURNS: 14 FREQUENCY: 14 GHZ

36.62 33.42 32.86 38.35 35.15

32.64 32.32 37.42 32.15 35.42

30.25 37.85 35.63 38.18

NUMBER OF RETURNS: 11 FREQUENCY: 15 GHZ

36.26 36.14 33.80 35.82 34.81

34.14 38.08 35.77 35.93 33.75

34.20

NUMBER OF RETURNS: 9 FREQUENCY: 16 GHZ

27.51 38.75 40.90 32.19 38.45

39.45 41.15 39.49 42.80

NUMBER OF RETURNS: 0 FREQUENCY: 17 GHZ

INCIDENCE ANGLE= 12.5

SITE-R10-P2

NUMBER OF RETURNS: 0 FREQUENCY: 9 GHZ
NUMBER OF RETURNS: 0 FREQUENCY: 10 GHZ
NUMBER OF RETURNS: 0 FREQUENCY: 11 GHZ
NUMBER OF RETURNS: 0 FREQUENCY: 12 GHZ
NUMBER OF RETURNS: 0 FREQUENCY: 13 GHZ
NUMBER OF RETURNS: 17 FREQUENCY: 14 GHZ
37.07 39.21 36.21 39.67 40.33
40.89 43.06 41.20 40.47 42.44
42.10 38.70 41.40 40.75 39.20
40.98 40.44
NUMBER OF RETURNS: 17 FREQUENCY: 15 GHZ
41.12 32.29 43.19 37.37 40.76
36.20 42.61 37.90 45.04 36.59
41.07 37.42 38.75 37.52 39.27
37.14 39.57
NUMBER OF RETURNS: 8 FREQUENCY: 16 GHZ
40.12 43.26 42.30 43.11 41.60
42.20 43.10 44.50
NUMBER OF RETURNS: 0 FREQUENCY: 17 GHZ

INCIDENCE ANGLE= 25.0

SITE-R10-P2

NUMBER OF RETURNS: 0 FREQUENCY: 9 GHZ
NUMBER OF RETURNS: 0 FREQUENCY: 10 GHZ
NUMBER OF RETURNS: 15 FREQUENCY: 11 GHZ

35.44 35.37 38.56 37.75 36.90

36.17 40.19 29.93 37.67 37.24

35.85 37.80 38.89 39.39 36.50

NUMBER OF RETURNS: 16 FREQUENCY: 12 GHZ

34.58 34.92 31.84 35.11 32.26

34.60 31.52 33.21 32.36 34.21

31.78 33.75 31.94 33.13 32.49

33.65

NUMBER OF RETURNS: 15 FREQUENCY: 13 GHZ

37.40 37.75 39.20 41.50 36.80

42.65 37.04 30.29 36.56 41.34

41.87 39.50 40.22 41.32 40.30

NUMBER OF RETURNS: 16 FREQUENCY: 14 GHZ

38.57 38.05 40.86 24.75 41.50

21.96 40.70 40.64 38.88 41.73

39.26 43.24 42.82 40.16 43.58

42.69

NUMBER OF RETURNS: 15 FREQUENCY: 15 GHZ

39.39 43.50 42.85 40.00 40.61

43.25 40.00 39.48 39.62 39.14

38.91 43.81 37.96 48.13 46.47

NUMBER OF RETURNS: 9 FREQUENCY: 16 GHZ

47.79 47.19 46.00 45.86 44.83

42.31 42.50 44.10 40.57

NUMBER OF RETURNS: 9 FREQUENCY: 17 GHZ

46.00 45.75 47.17 47.40 44.30

46.02 48.31 48.61 49.64

INCIDENCE ANGLE= 38.0

SITE-R10-P2
NUMBER OF RETURNS: 2 FREQUENCY: 9 GHZ
39.94 38.40
NUMBER OF RETURNS: 9 FREQUENCY: 10 GHZ
36.70 38.24 43.06 48.46 48.14
48.32 37.85 37.18 37.43
NUMBER OF RETURNS: 16 FREQUENCY: 11 GHZ
40.05 40.88 42.37 38.00 40.95
39.12 42.03 45.83 39.69 42.13
41.40 40.35 43.54 41.60 40.00
39.40
NUMBER OF RETURNS: 19 FREQUENCY: 12 GHZ
33.41 35.76 34.14 36.70 34.55
34.78 34.06 34.65 34.45 35.16
33.89 36.12 33.96 35.36 35.30
35.10 33.68 32.95 33.46
NUMBER OF RETURNS: 39 FREQUENCY: 13 GHZ
41.83 43.41 43.96 41.68 38.20
44.02 41.15 44.15 38.95 40.36
40.20 40.25 37.75 38.60 37.31
40.04 40.27 38.99 41.20 40.88
42.85 38.97 41.44 40.40 42.50
40.68 41.75 38.25 40.50 39.21
45.34 38.20 43.10 38.93 39.65
40.75 40.46 45.04 42.30
NUMBER OF RETURNS: 0 FREQUENCY: 14 GHZ
NUMBER OF RETURNS: 0 FREQUENCY: 15 GHZ
NUMBER OF RETURNS: 0 FREQUENCY: 16 GHZ
NUMBER OF RETURNS: 21 FREQUENCY: 17 GHZ
44.88 44.91 45.94 46.60 45.45
44.56 47.38 45.72 45.17 45.71
46.65 45.93 48.15 44.67 48.87
48.27 45.15 45.44 43.60 42.97
45.19

INCIDENCE ANGLE= 50.0

SITE-R10-F2

NUMBER OF RETURNS: 14 FREQUENCY: 9 GHZ

42.40 40.13 43.37 38.35 44.05

40.11 43.30 41.13 41.60 42.38

41.26 42.75 42.98 44.25

NUMBER OF RETURNS: 0 FREQUENCY: 10 GHZ
NUMBER OF RETURNS: 0 FREQUENCY: 11 GHZ
NUMBER OF RETURNS: 0 FREQUENCY: 12 GHZ
NUMBER OF RETURNS: 15 FREQUENCY: 13 GHZ

44.83 43.10 45.40 42.90 46.40

42.36 43.92 44.30 43.42 44.24

43.66 45.87 44.00 46.94 44.05

NUMBER OF RETURNS: 10 FREQUENCY: 14 GHZ

44.29 44.62 46.67 42.58 44.85

43.40 46.27 44.29 44.44 45.80

NUMBER OF RETURNS: 12 FREQUENCY: 15 GHZ

44.39 45.30 44.02 46.20 45.11

44.13 35.75 47.34 47.32 48.50

47.60 47.06

NUMBER OF RETURNS: 17 FREQUENCY: 16 GHZ

49.63 48.20 48.81 47.90 48.74

47.79 48.47 46.60 47.90 47.30

47.14 50.56 49.00 48.65 48.50

48.95 50.51

NUMBER OF RETURNS: 0 FREQUENCY: 17 GHZ

SITE-R11-NOT-GIVEN INCIDENCE ANGLE = 12.5

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 28

-36.28	-36.51	-36.40	-30.40	-36.37
-34.12	-36.67	-32.17	-33.24	-31.24
-35.20	-33.60	-34.89	-34.98	-37.00
-34.18	-36.50	-30.65	-34.75	-32.66
-36.12	-32.08	-30.59	-31.17	-35.74
-32.53	-34.23	-31.19		

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 25

-33.20	-33.72	-30.29	-34.27	-31.60
-36.43	-34.40	-33.95	-33.08	-34.20
-31.22	-36.18	-31.20	-34.24	-34.40
-31.16	-28.54	-31.26	-29.06	-32.04
-32.74	-31.61	-31.37	-31.75	-29.40

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 21

-31.91	-30.40	-32.15	-31.29	-30.41
-30.45	-31.32	-30.00	-34.36	-30.35
-33.53	-30.80	-32.45	-31.70	-33.97
-35.25	-32.22	-33.59	-31.96	-31.50
-33.25				

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 16

-31.05	-31.07	-31.43	-30.45	-29.90
-29.37	-29.44	-30.38	-29.48	-29.18
-29.78	-29.07	-29.45	-30.36	-29.35
-29.70				

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 38

-39.80	-33.24	-34.50	-34.33	-34.12
-33.46	-35.50	-33.14	-39.65	-20.30
-34.73	-37.35	-37.06	-33.14	-35.74
-33.42	-19.52	-34.25	-24.60	-36.72
-34.32	-37.77	-36.15	-39.62	-37.42
-39.55	-37.77	-38.20	-35.38	-37.60
-37.27	-35.40	-32.92	-32.85	-40.42
-34.27	-36.31	-36.14		

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 17

-39.92	-39.43	-38.69	-40.22	-40.34
-40.29	-37.51	-38.78	-36.16	-35.74
-36.95	-36.80	-37.50	-36.73	-35.18
-35.85	-40.57			

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 14

-39.01	-37.14	-36.75	-36.11	-38.16
-35.14	-35.90	-35.23	-35.15	-38.75
-37.60	-37.60	-34.15	-37.40	

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 39

-38.42	-41.46	-39.91	-43.63	-39.87
-40.64	-39.69	-39.95	-40.11	-37.78
-40.31	-38.40	-39.75	-39.45	-37.60
-42.15	-39.39	-41.50	-38.75	-38.16
-43.43	-43.29	-40.16	-43.50	-39.35
-42.69	-43.78	-42.90	-42.25	-41.15
-44.34	-38.77	-41.16	-39.82	-39.25
-40.80	-41.50	-38.57	-40.50	

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 24

-46.77	-49.11	-49.74	-48.57	-45.52
-48.60	-44.77	-48.95	-47.22	-46.36
-49.36	-48.14	-46.24	-46.34	-45.48
-47.85	-47.92	-46.49	-44.92	-44.87
-48.71	-46.37	-47.07	-37.15	

SITE-R11-NOT-GIVEN INCIDENCE ANGLE = 25.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 36

-36.32	-34.97	-33.06	-34.00	-36.14
-35.00	-34.75	-36.04	-34.75	-37.52
-33.15	-35.14	-31.95	-35.69	-33.45
-36.17	-37.95	-34.29	-35.04	-37.42
-33.67	-32.50	-32.40	-33.90	-37.77
-37.06	-37.56	-38.46	-34.40	-38.61
-36.87	-32.59	-34.35	-32.49	-35.48
-35.14				

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 23

-30.57	-32.34	-34.86	-31.19	-35.85
-32.49	-35.16	-31.18	-36.37	-33.64
-38.27	-30.64	-35.09	-31.94	-36.16
-31.16	-33.82	-30.84	-34.97	-31.34
-35.06	-33.15	-33.26		

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 19

-38.64	-32.19	-35.14	-36.50	-34.75
-34.75	-34.95	-33.14	-34.67	-32.84
-37.54	-31.15	-38.14	-32.67	-32.01
-31.81	-32.37	-32.55	-31.99	

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 14

-32.21	-34.15	-31.92	-32.64	-32.34
-32.85	-35.40	-34.15	-34.85	-35.74
-33.47	-32.82	-33.97	-33.33	

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 13

-37.24	-37.75	-36.78	-36.05	-35.17
-38.82	-40.24	-39.07	-35.24	-34.15
-36.49	-39.85	-36.82		

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 51

-35.14	-40.50	-37.10	-37.16	-36.24
-36.27	-35.36	-33.80	-36.76	-35.40
-36.02	-34.60	-35.81	-40.17	-42.60
-38.94	-35.17	-45.50	-36.76	-37.81
-37.76	-40.54	-39.15	-42.25	-43.45
-42.20	-47.21	-35.76	-46.75	-37.76
-48.38	-40.15	-47.17	-38.17	-36.07
-37.00	-36.32	-36.00	-36.85	-33.00
-40.56	-24.00	-36.86	-19.00	-39.50
-23.10	-36.35	-22.00	-21.00	-19.00
-17.00				

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 15

-38.00	-39.64	-27.67	-16.61	-18.25
-13.25	-23.48	-7.50	-17.00	-11.61
-18.35	-14.60	-17.36	-9.14	-11.97

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 15

-9.13	-7.13	-7.75	-7.06	-10.14
-42.34	-8.75	-45.40	-12.40	-46.50
-13.40	-43.93	-24.93	-44.25	-48.89

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 28

-47.12	-47.20	-46.25	-47.09	-50.12
-46.12	-46.18	-47.15	-27.16	-48.34
-28.60	-48.60	-47.65	-47.06	-47.82
-45.15	-47.50	-46.75	-48.75	-46.80
-44.15	-45.36	-45.66	-46.70	-37.07
-47.64	-47.15	-46.12		

SITE-R11-P1 INCIDENCE ANGLE = 50.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 10

-42.79	-45.43	-43.64	-43.40	-42.85
-43.08	-44.50	-42.88	-44.90	-45.34

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 12

-46.70	-47.50	-45.00	-41.50	-42.20
-41.91	-41.50	-40.57	-41.11	-40.74
-40.20	-41.60			

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 19

-47.87	-53.64	-52.14	-51.67	-49.10
-52.10	-48.05	-51.50	-47.60	-52.41
-51.75	-51.00	-47.46	-49.15	-48.95
-47.54	-47.54	-45.40	-52.71	

SITE-R11-NOT-GIVEN INCIDENCE ANGLE = 50.0

FREQUENCY = 9.0 GHz NUMBER OF RETURNS = 22

-38.40	-39.70	-39.75	-40.13	-37.51
-40.40	-39.25	-41.46	-36.55	-41.34
-37.50	-41.40	-37.87	-40.55	-38.22
-41.60	-40.87	-40.92	-36.58	-39.95
-38.25	-38.45			

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 19

-40.25	-36.75	-39.98	-41.45	-37.36
-42.15	-38.48	-38.75	-37.56	-37.52
-37.68	-40.07	-38.96	-37.03	-39.40
-37.35	-37.13	-38.56	-37.98	

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 15

-37.00	-38.22	-37.71	-37.90	-41.70
-37.18	-37.12	-36.96	-37.07	-37.34
-41.62	-37.17	-43.32	-37.56	-36.87

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 22

-42.82	-40.08	-39.70	-41.20	-41.37
-40.69	-42.39	-39.49	-42.20	-42.87
-42.68	-42.17	-49.42	-43.65	-40.71
-42.77	-38.45	-36.43	-42.90	-42.97
-41.25	-40.80			

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 17

-40.15	-43.60	-40.25	-40.08	-43.56
-39.56	-43.25	-41.32	-40.74	-39.50
-40.70	-41.20	-40.20	-42.15	-40.14
-41.46	-40.62			

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 17

-43.20	-46.70	-44.89	-44.10	-43.18
-48.14	-45.20	-47.04	-44.85	-47.38
-42.80	-46.95	-41.96	-47.07	-42.40
-45.29	-40.40			

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 13

-44.63	-48.18	-46.10	-46.50	-45.41
-44.50	-44.15	-42.69	-44.21	-42.75
-44.90	-43.78	-42.29		

FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 18

-47.20	-43.36	-47.60	-44.50	-48.15
-46.07	-46.55	-45.81	-46.77	-46.34
-44.27	-46.15	-44.93	-46.45	-44.92
-47.09	-47.15	-47.54		

FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 18

-52.51	-51.60	-51.23	-52.78	-53.70
-53.40	-53.22	-51.29	-53.60	-52.67
-52.60	-52.70	-53.14	-53.45	-51.20
-50.96	-48.15	-52.74		

INCIDENCE ANGLE = 25.0

FREQUENCY = 10.0 GHz NUMBER OF RETURNS = 44

-35.60	-34.70	-35.29	-37.10
-34.34	-33.93	-33.72	-34.42
-35.71	-35.20	-35.90	-35.60
-37.40	-36.26	-33.44	-32.84
-35.84	-36.52	-35.60	-36.00
-35.12	-35.52	-35.06	-33.79
-35.74	-33.30	-34.50	-36.07
-36.37	-35.55	-35.09	-33.84
-33.35	-35.04	-33.50	

FREQUENCY = 11.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 12.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 13.0 GHz NUMBER OF RETURNS = 31

38.40	37.61	-37.84	-37.15
-38.29	-38.00	-36.33	-37.21
-37.12	-36.15	-38.49	-37.04
-38.67	36.40	-37.15	-42.50
-40.90	-39.75	-39.15	-38.51
37.52	37.25	-37.17	-36.89

FREQUENCY = 14.0 GHz NUMBER OF RETURNS = 0

FREQUENCY = 15.0 GHz NUMBER OF RETURNS = 0

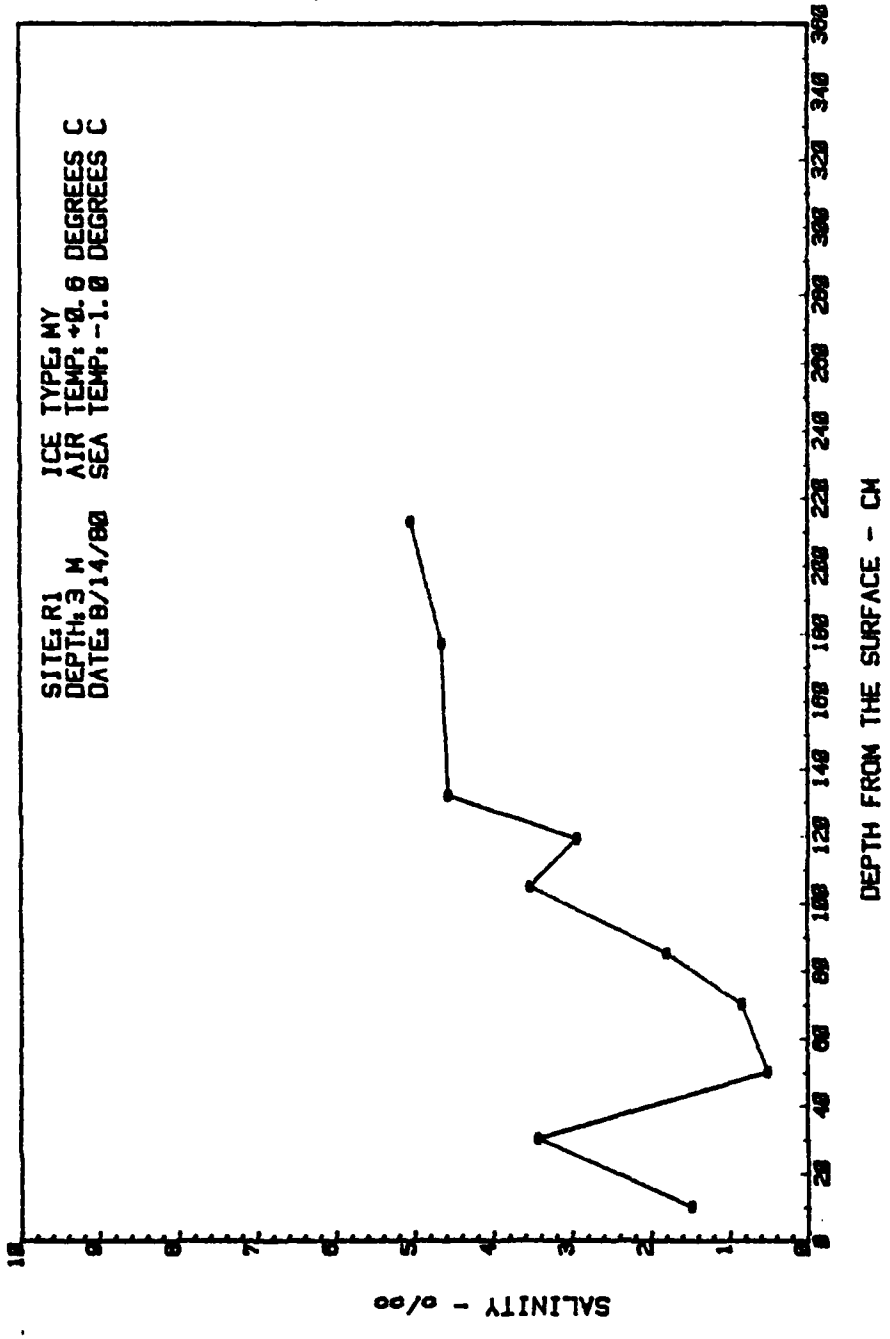
FREQUENCY = 16.0 GHz NUMBER OF RETURNS = 0

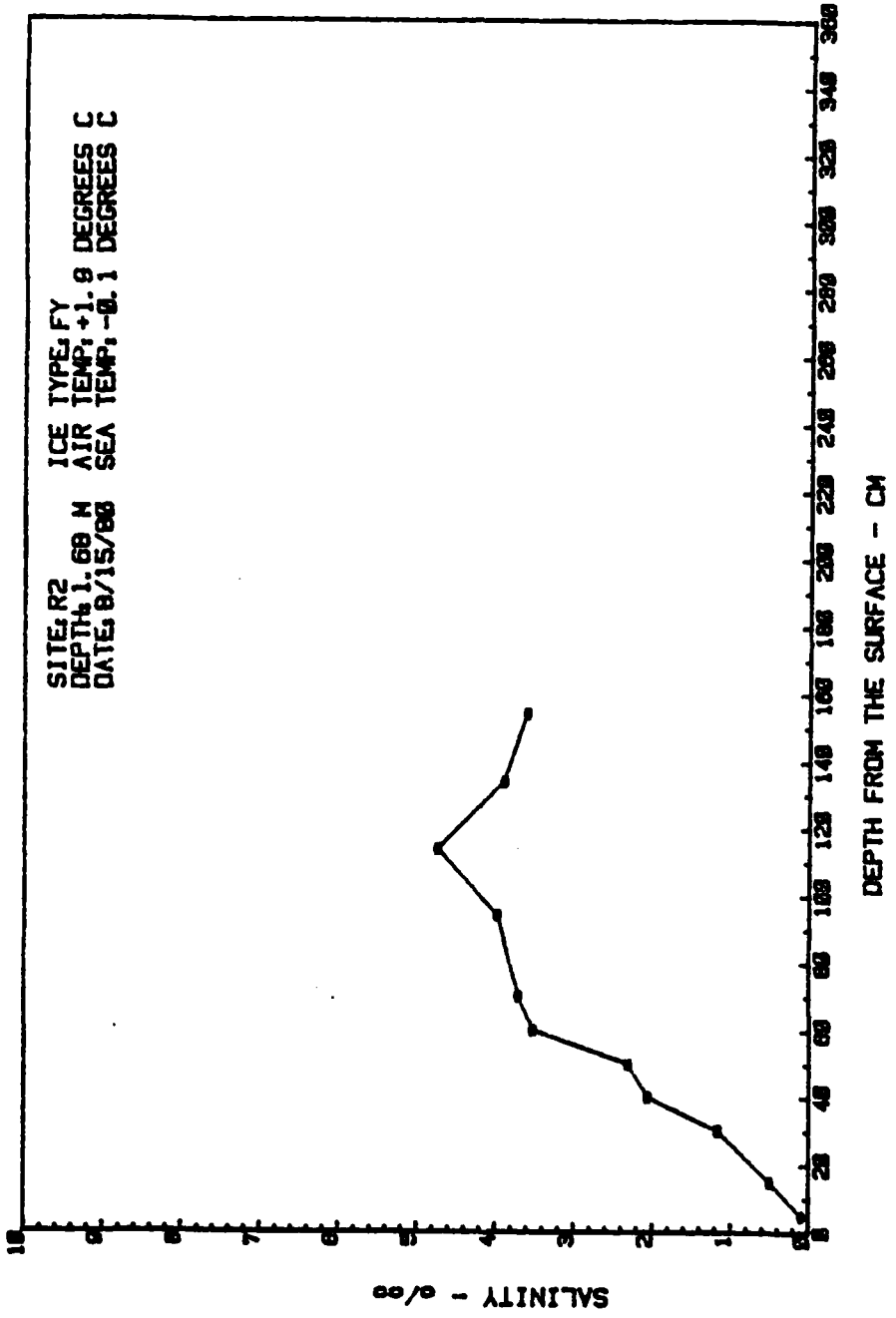
FREQUENCY = 17.0 GHz NUMBER OF RETURNS = 23

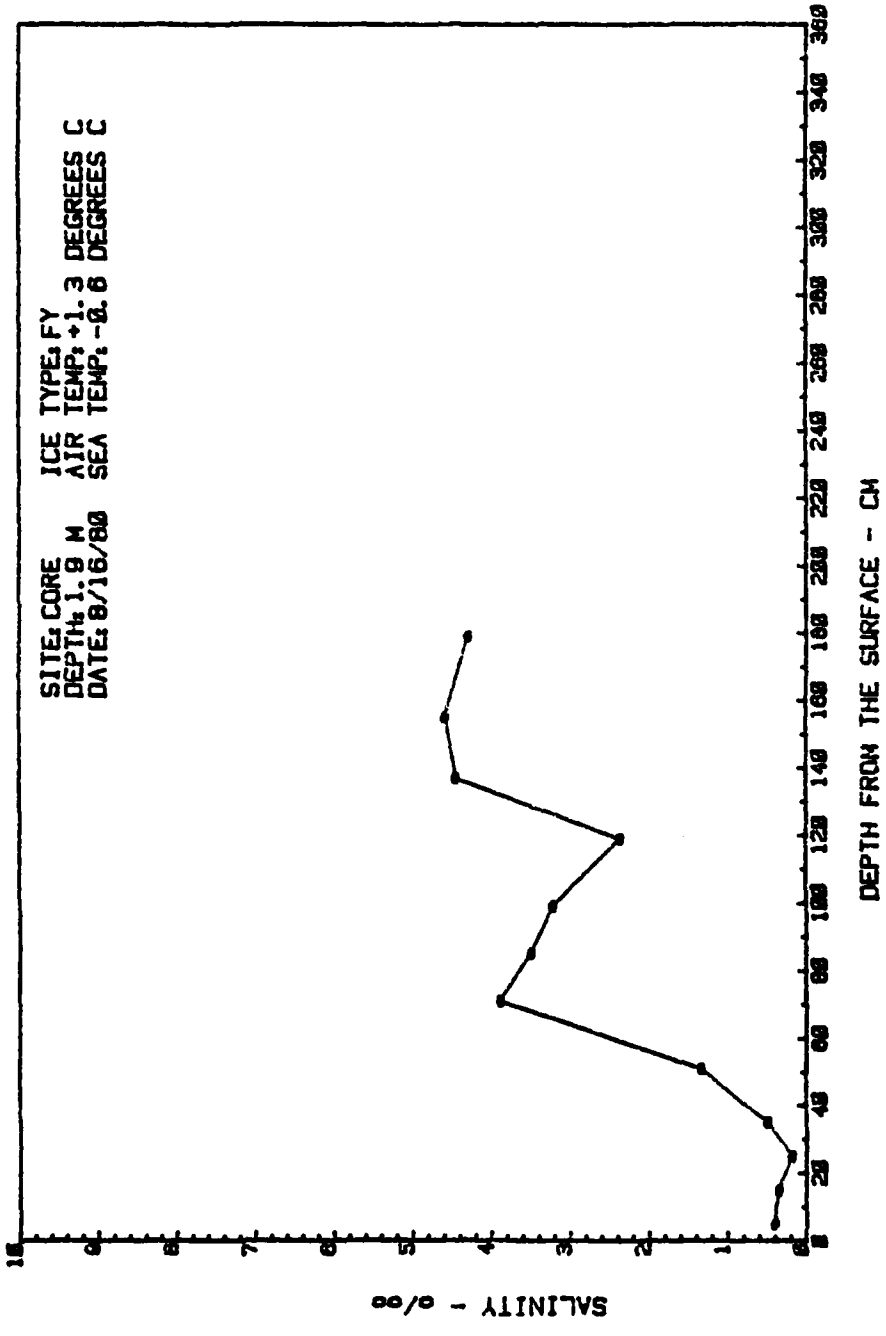
-46.25	-48.08	-47.62	-45.60
-47.37	-47.45	-47.15	-47.08
-46.89	-46.12	-47.50	-46.49
-47.30	-46.15	-47.23	-47.25
-45.20	-47.90		

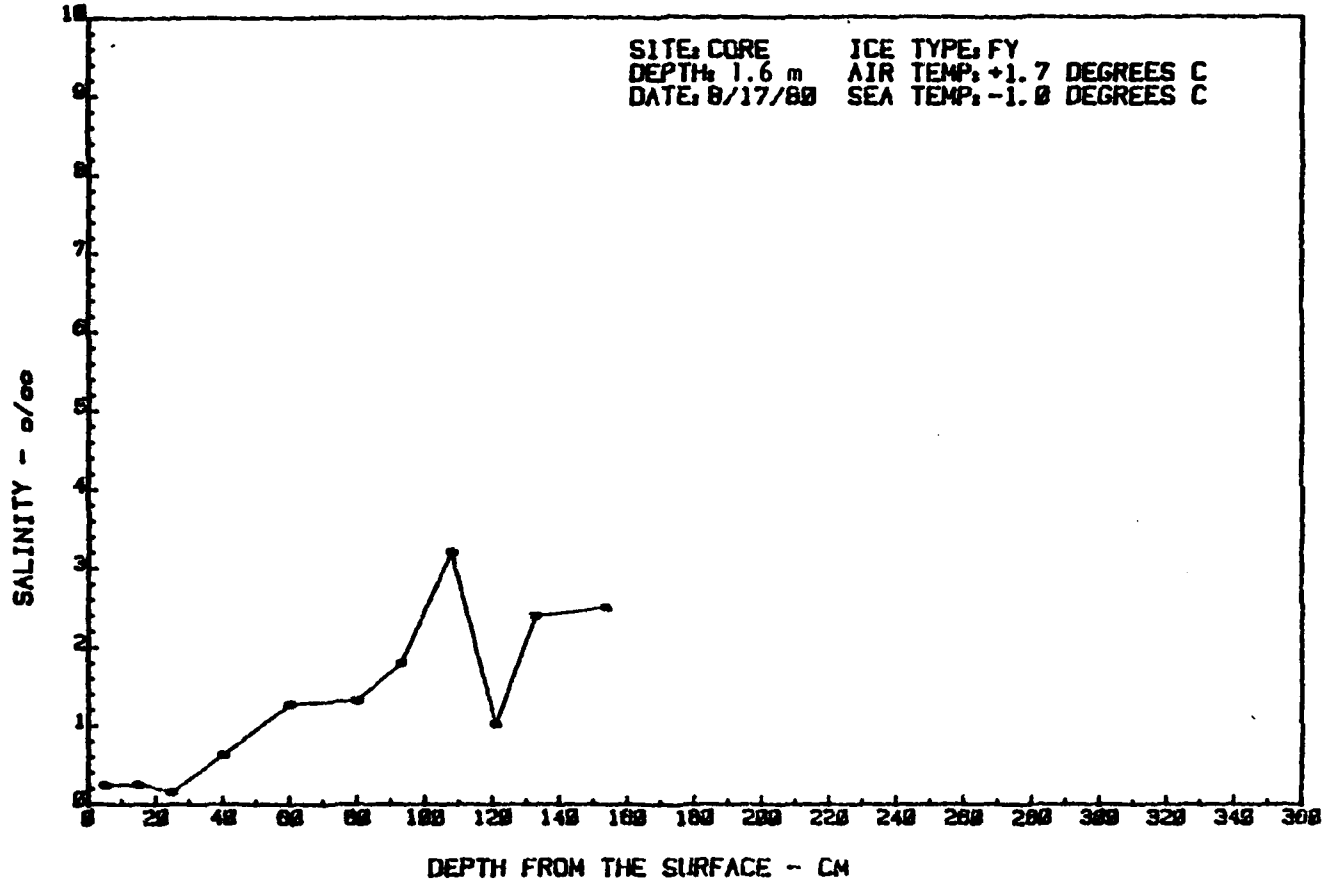
APPENDIX B

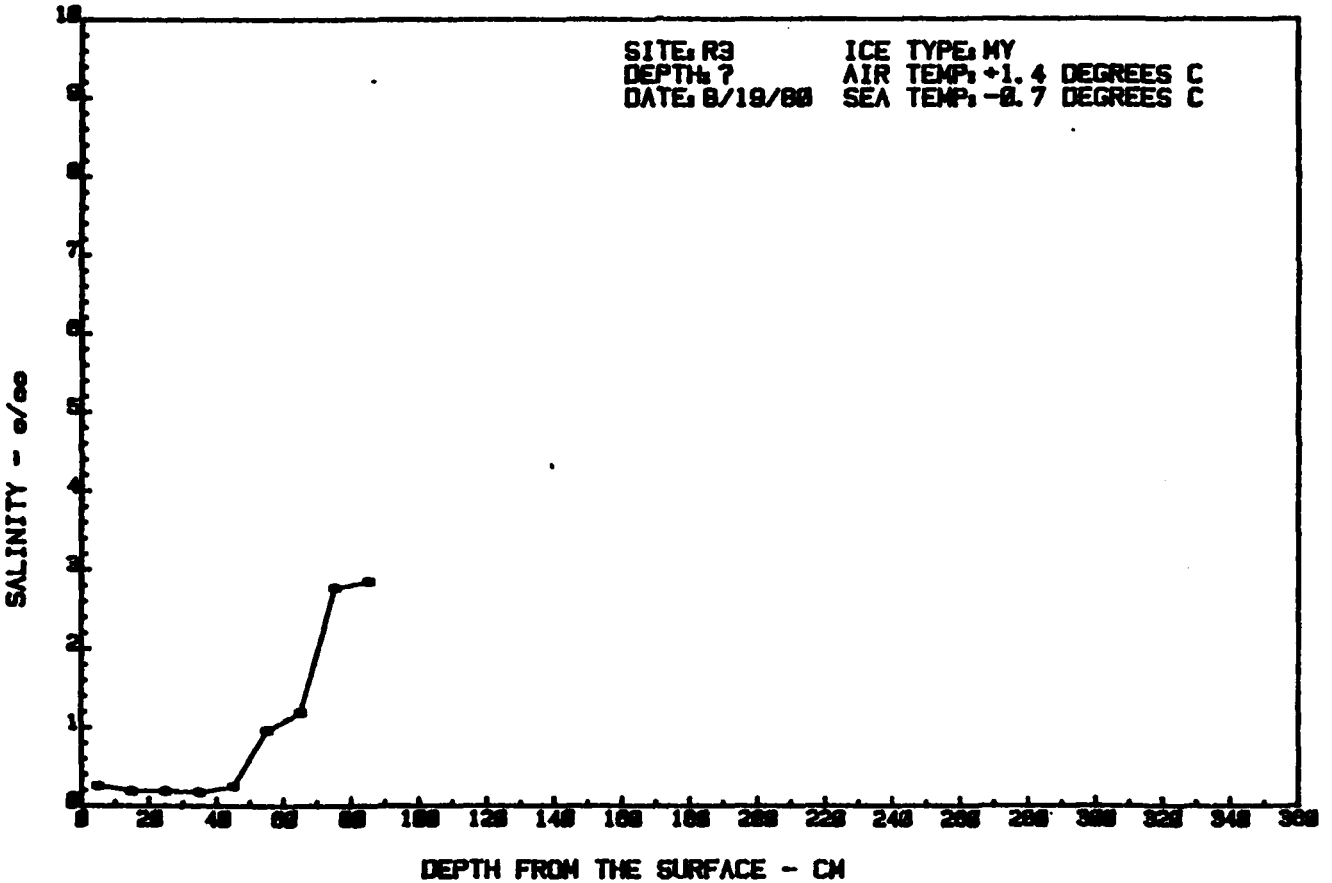
SEA ICE SALINITY PROFILES

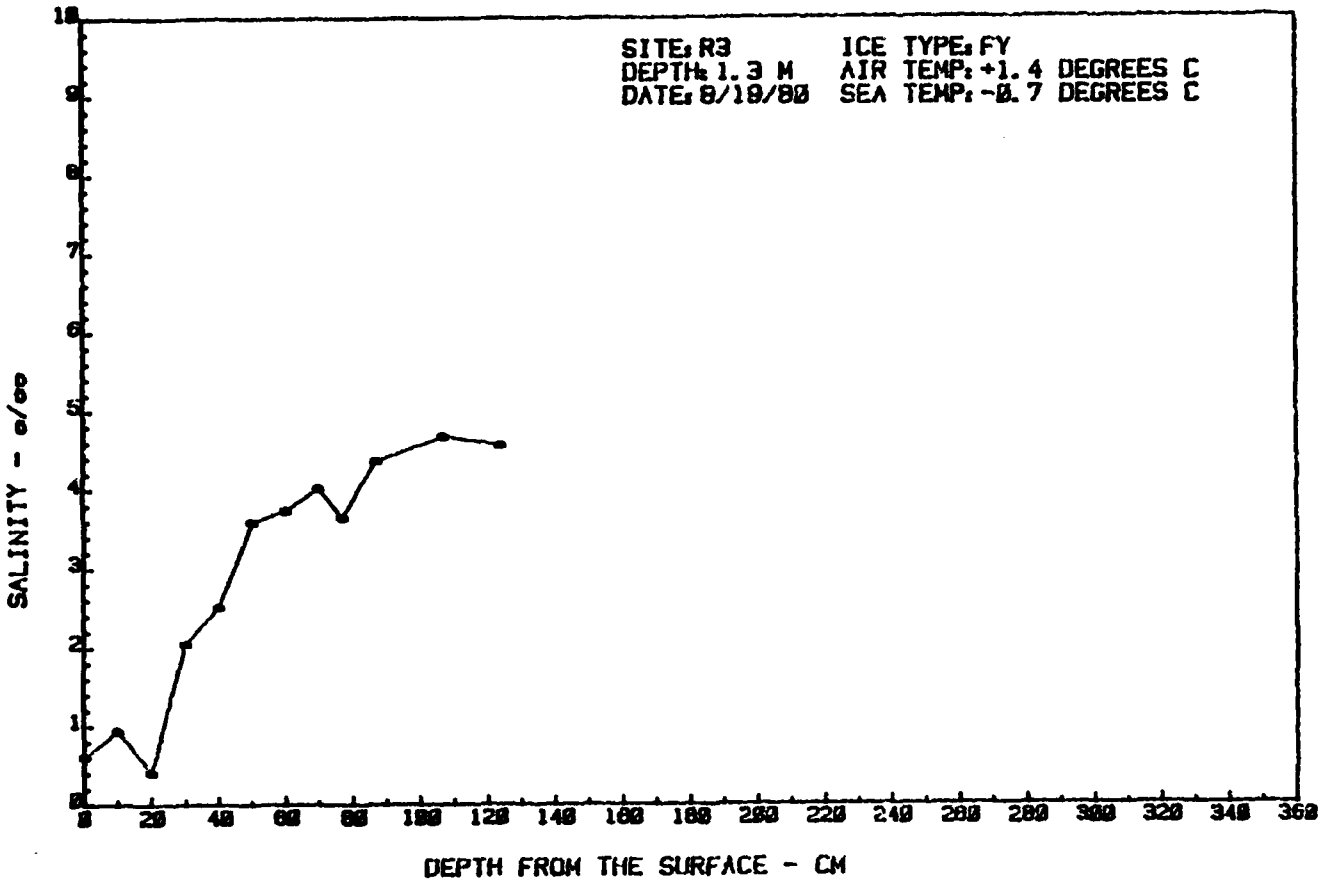

SITE: R1
DEPTH: 3 M
DATE: 8/14/80
ICE TYPE: MY
AIR TEMP: +0.6 DEGREES C
SEA TEMP: -1.0 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

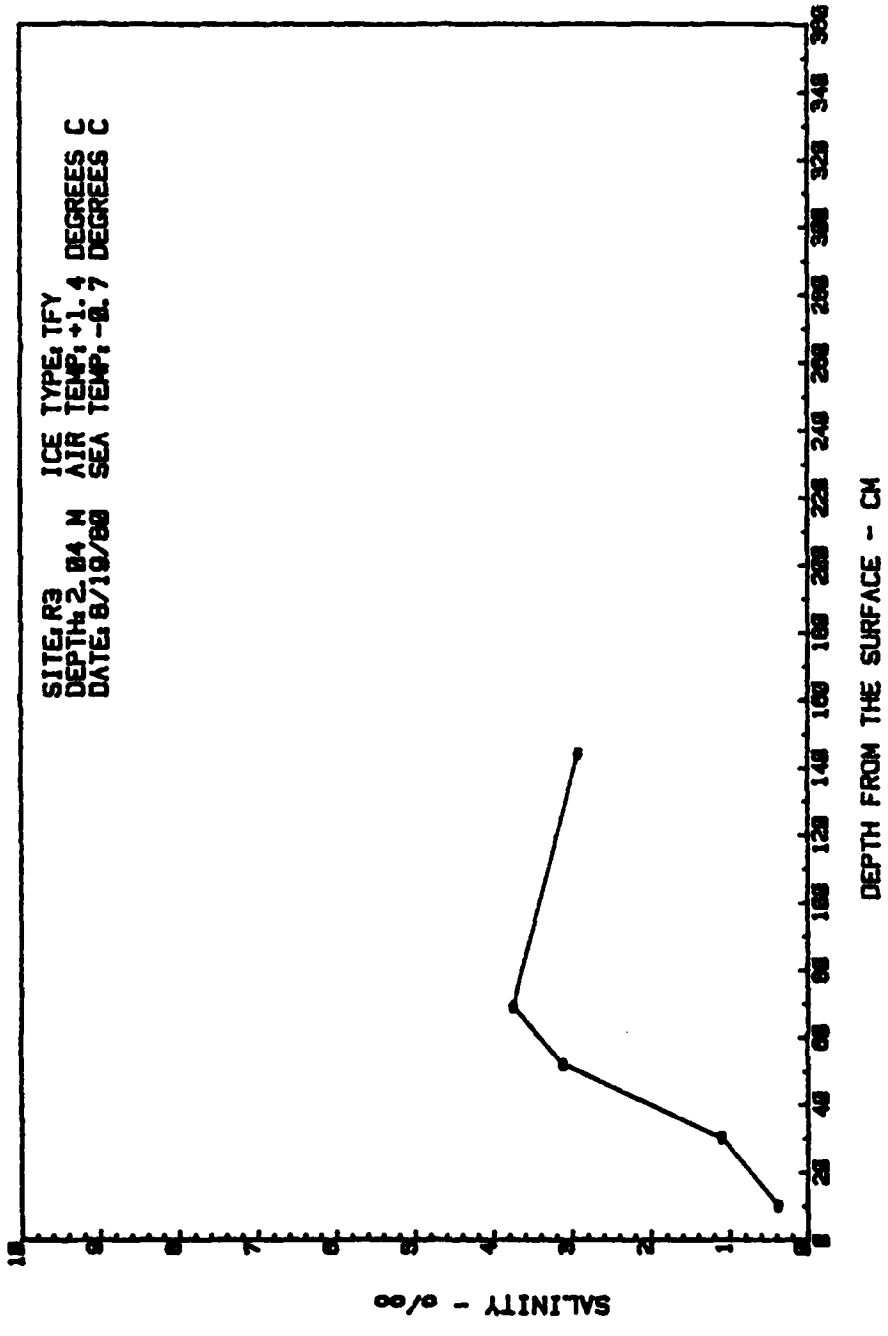

SITE: R2
DEPTH: 1.60 M
DATE: 8/15/88
ICE TYPE: FY
AIR TEMP: +1.0 DEGREES C
SEA TEMP: -0.1 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

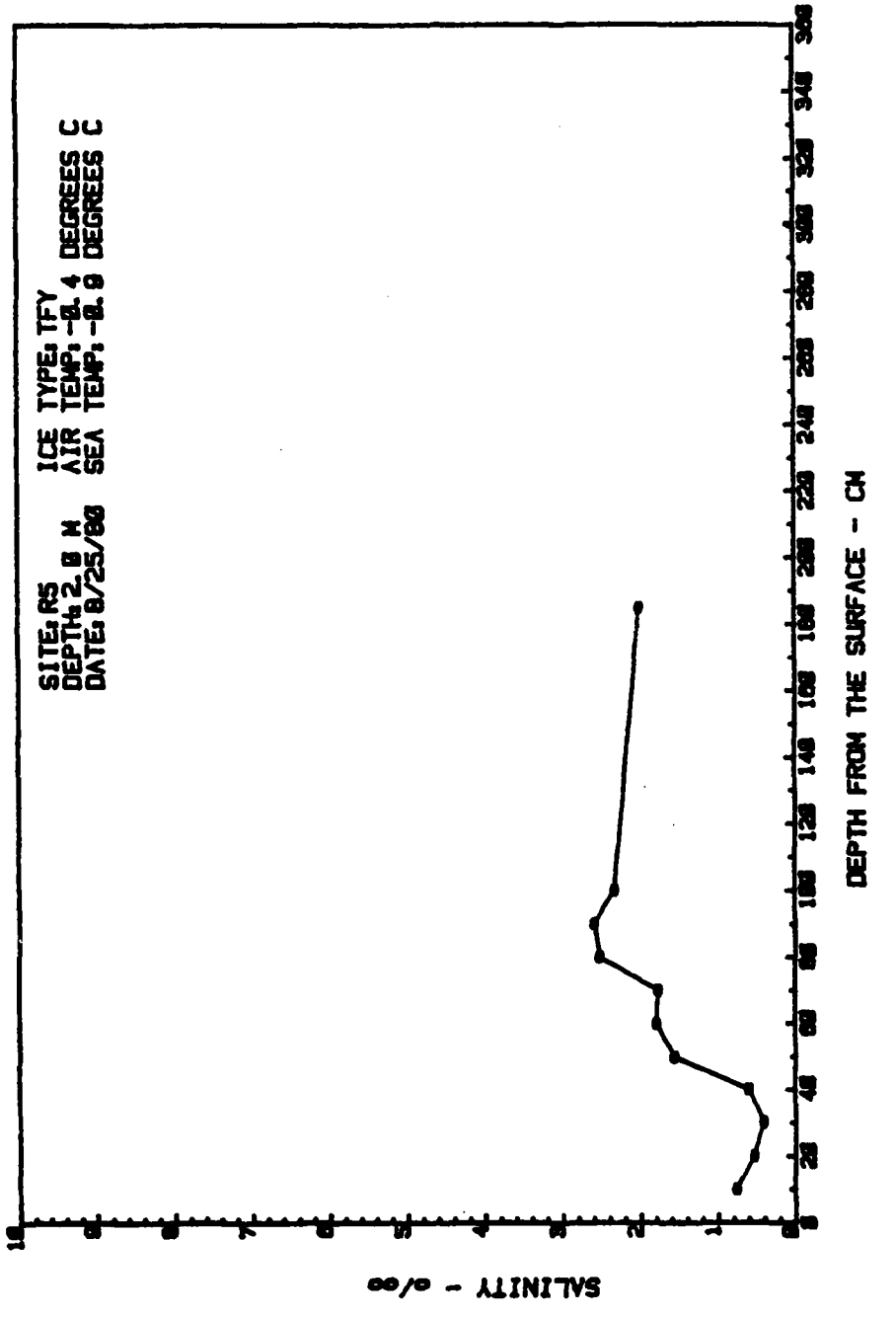

SITE: CORE
DEPTH: 1.9 M
DATE: 8/16/80
ICE TYPE: FY
AIR TEMP: +1.3 DEGREES C
SEA TEMP: -0.6 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

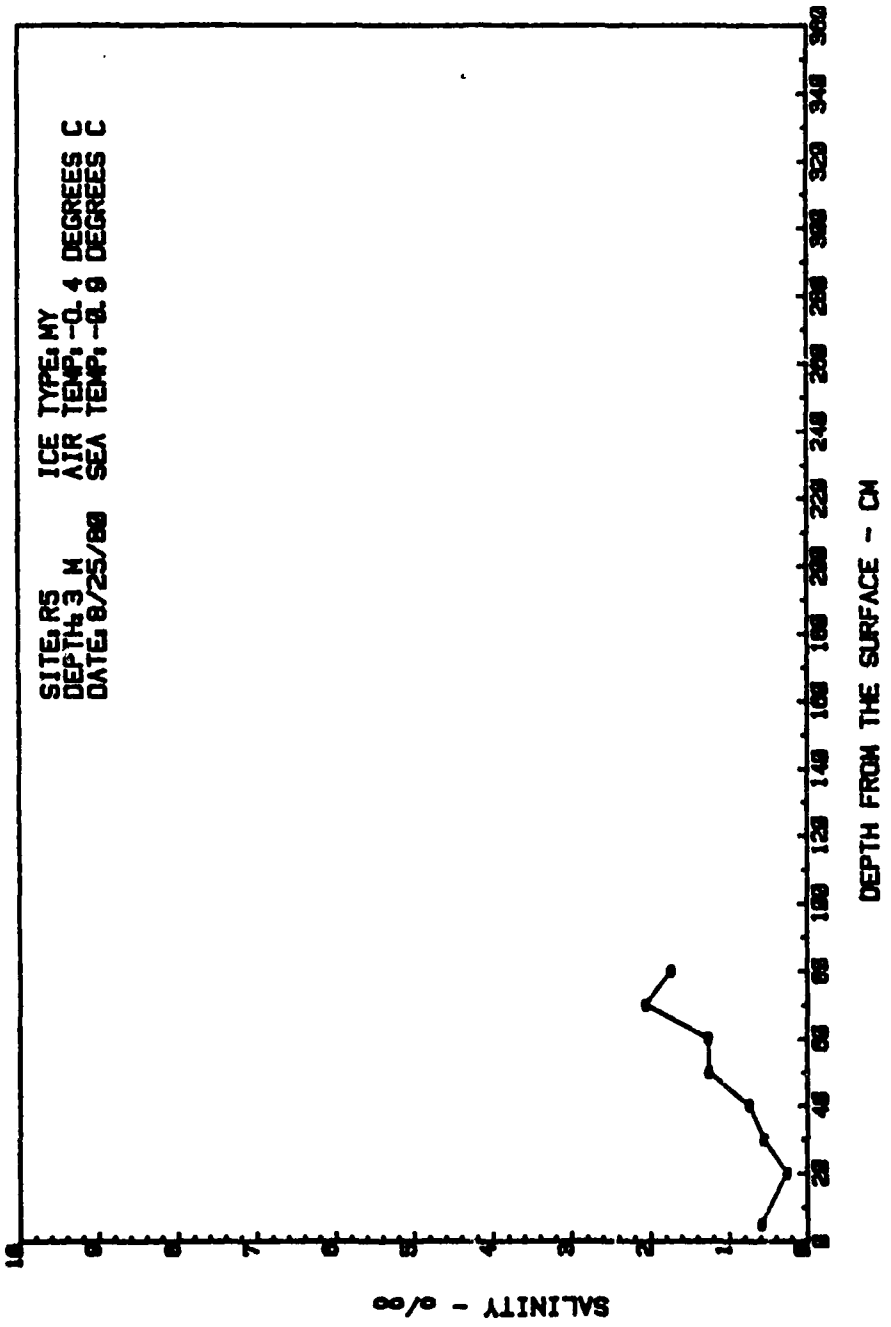

SITE: CORE
DEPTH: 1.6 m
DATE: 8/17/80
ICE TYPE: FY
AIR TEMP: +1.7 DEGREES C
SEA TEMP: -1.0 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

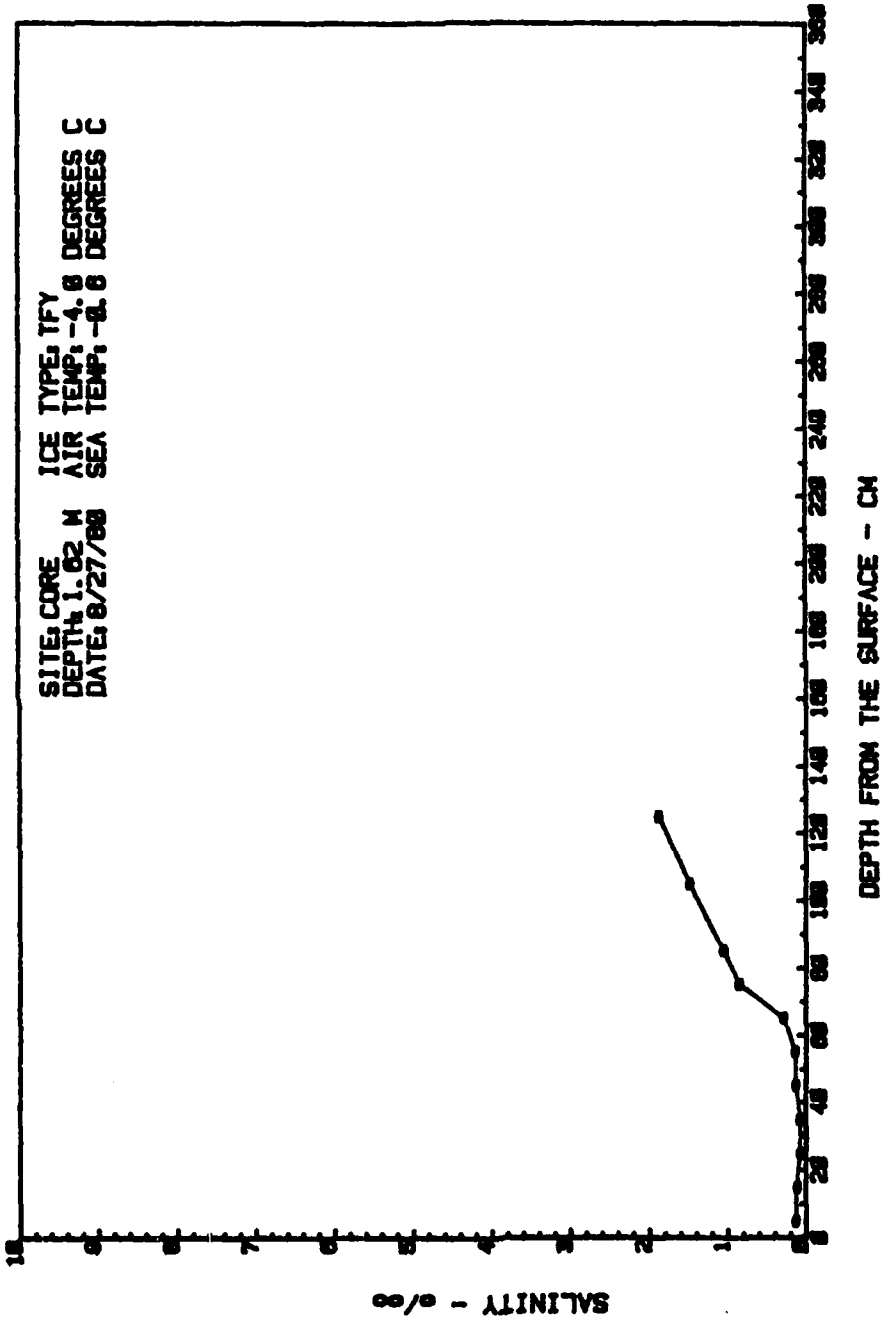

SITE: R3
DEPTH: ?
DATE: 8/19/88
ICE TYPE: MY
AIR TEMP: +1.4 DEGREES C
SEA TEMP: -0.7 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

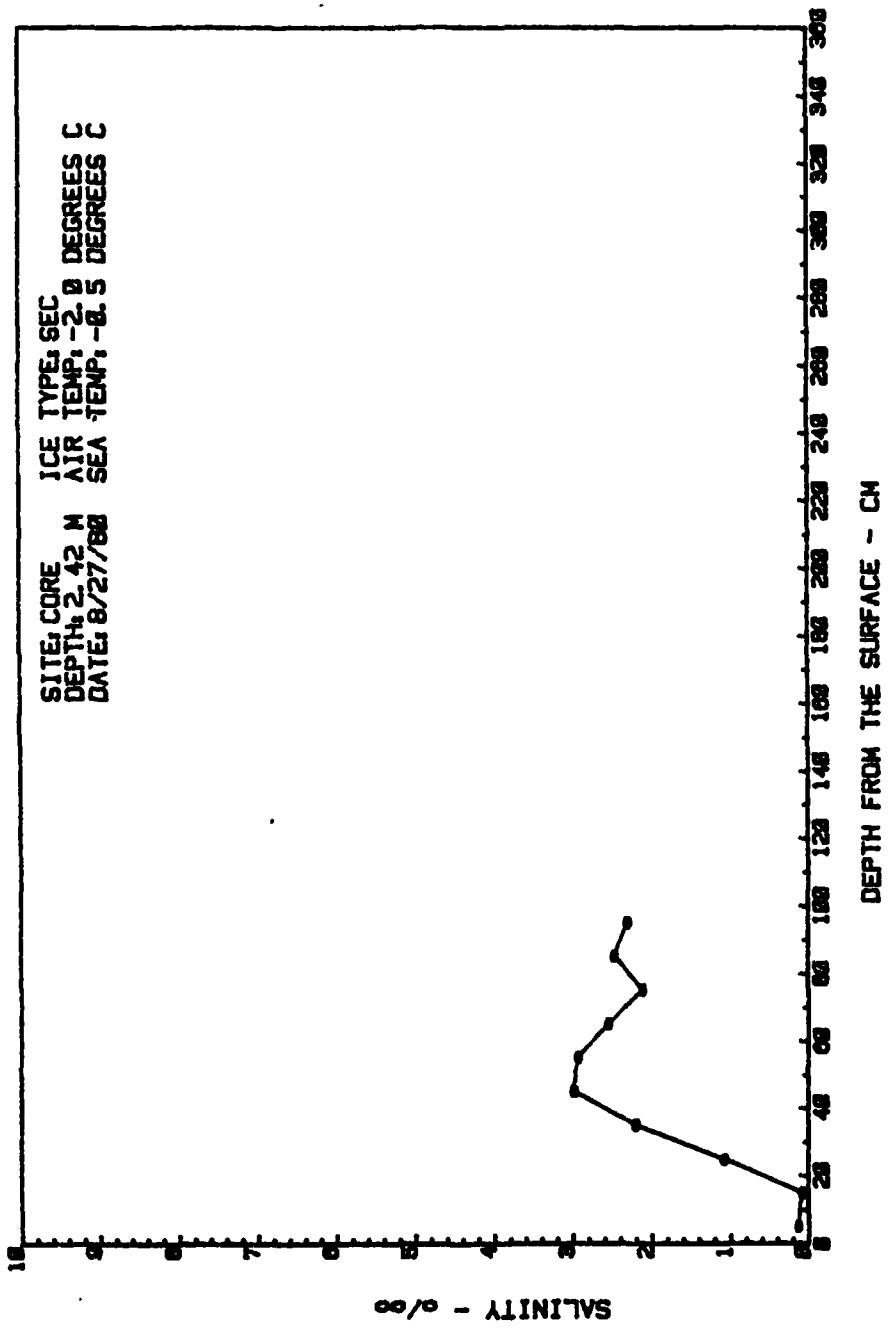

SITE: R3
DEPTH: 1.3 M
DATE: 8/10/80
ICE TYPE: FY
AIR TEMP: +1.4 DEGREES C
SEA TEMP: -0.7 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

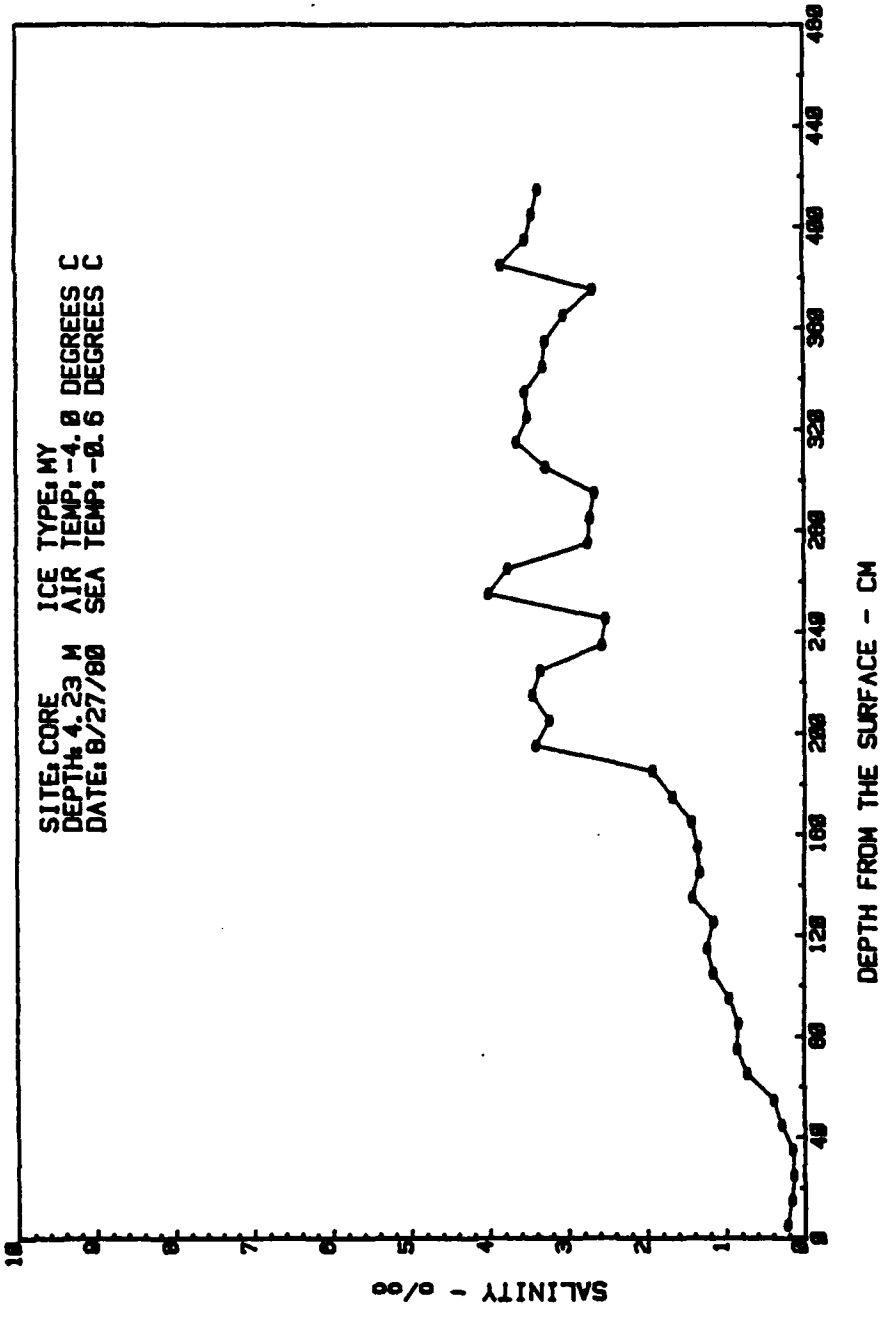

SITE: R3
DEPTH: 2.04 M
DATE: 8/10/88
ICE TYPE: TFY
AIR TEMP: +1.4 DEGREES C
SEA TEMP: -0.7 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

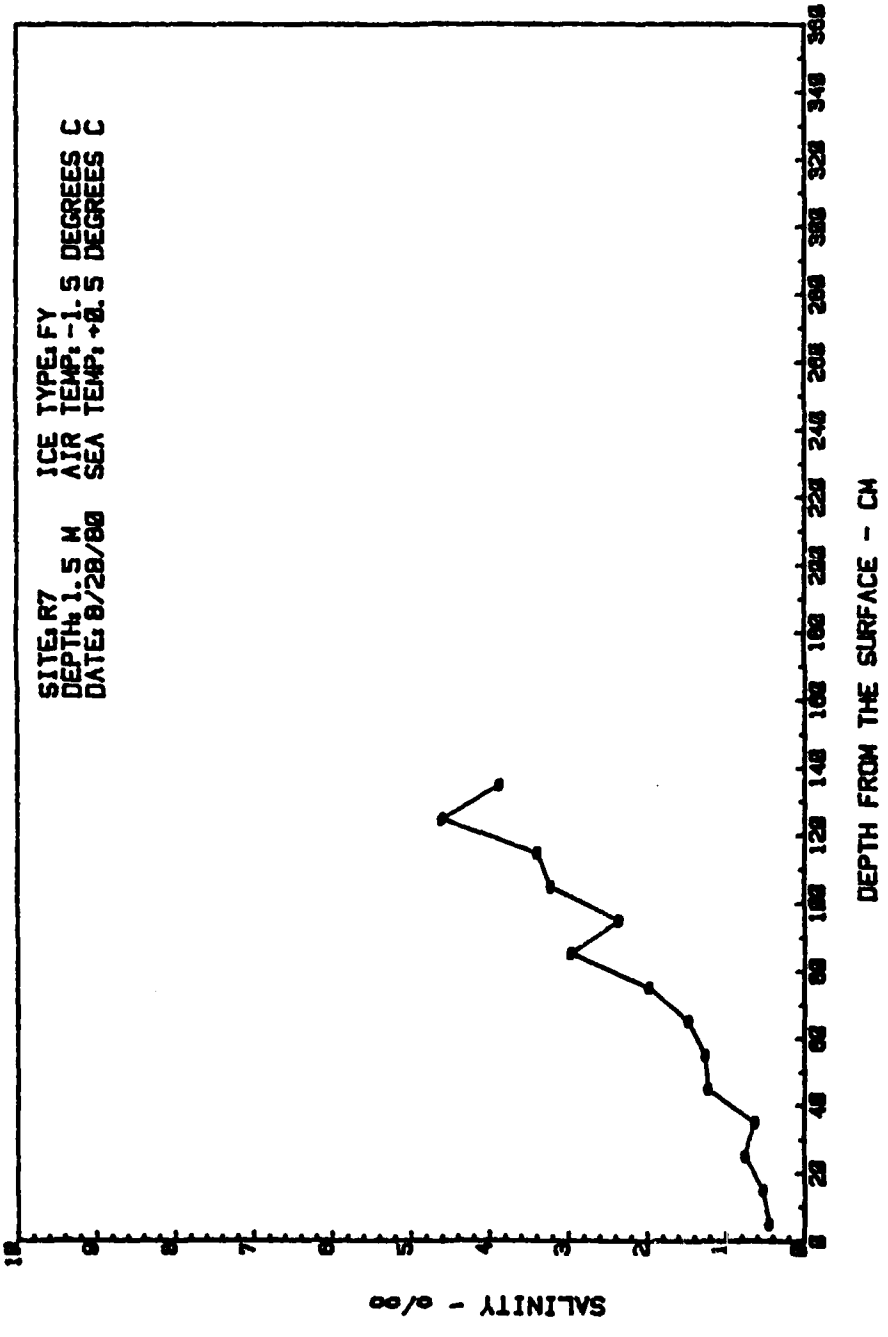

SITE: R5
DEPTH: 2.0 M
DATE: 8/25/88
ICE TYPE: TFY
AIR TEMP: -0.4 DEGREES C
SEA TEMP: -0.9 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

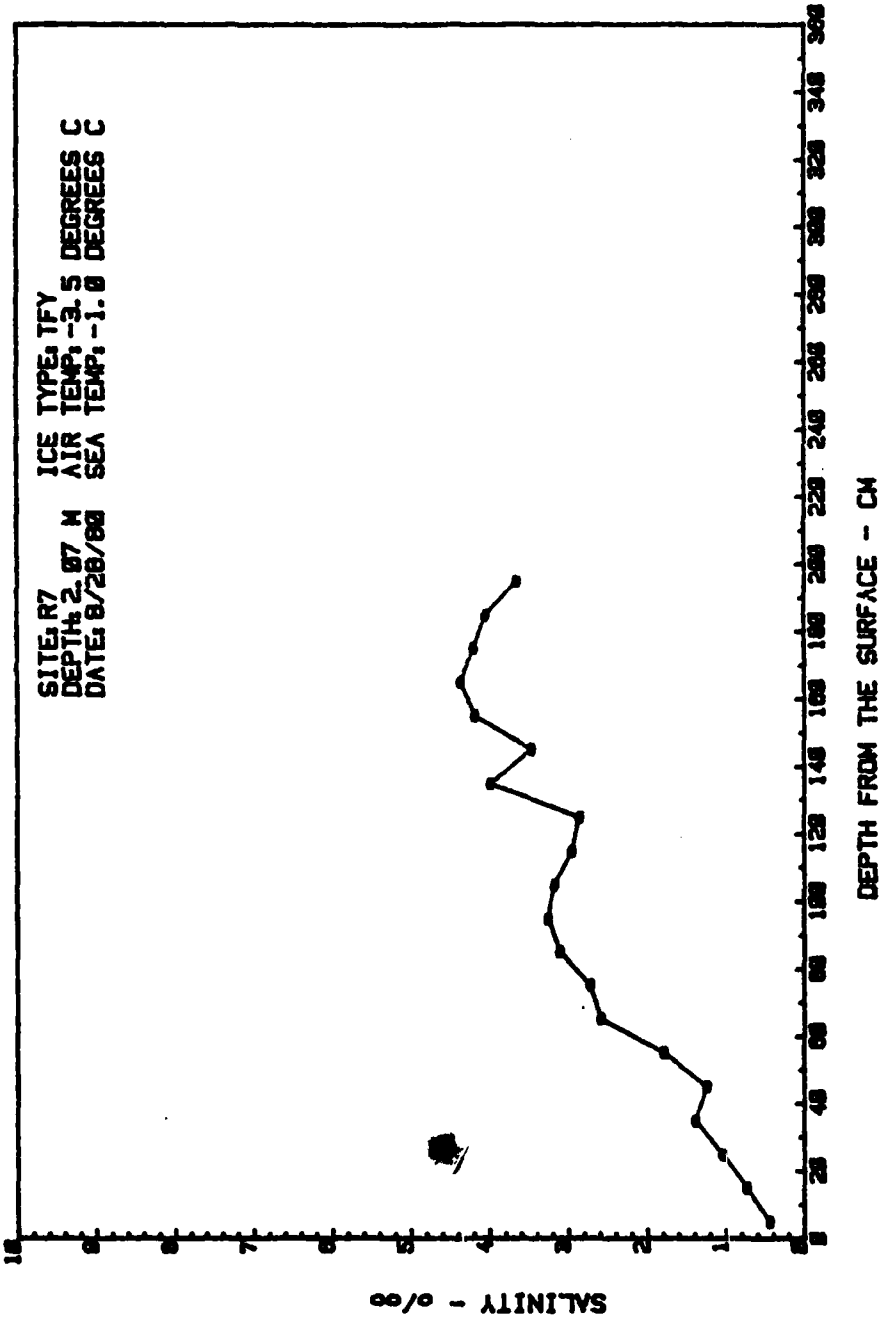

SITE: R5
DEPTH: 3 M
DATE: 8/25/88
ICE TYPE: MY
AIR TEMP: -0.4 DEGREES C
SEA TEMP: -0.9 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

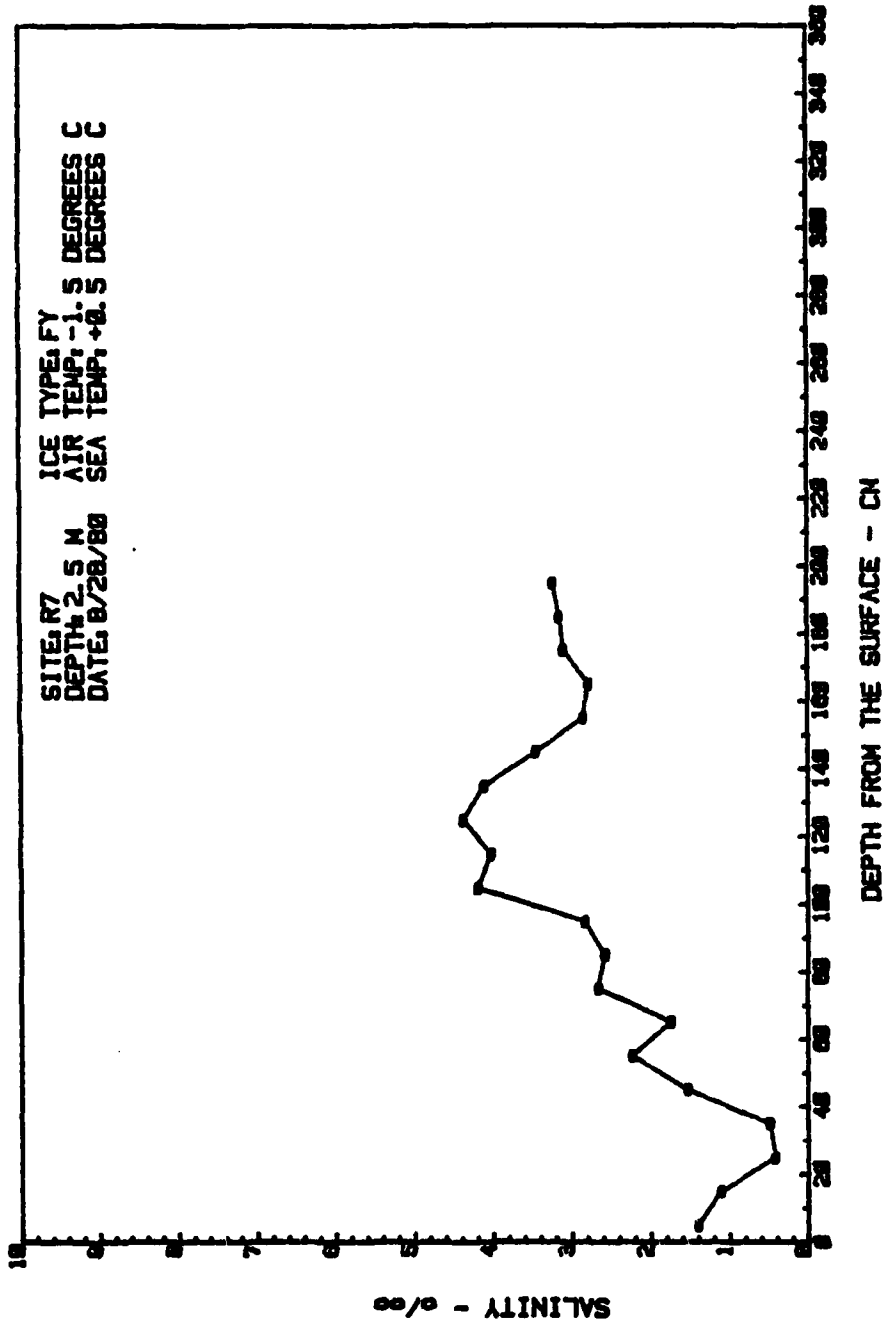

SITE: CORE
DEPTH: 1.62 M
DATE: 8/27/88
ICE TYPE: TFY
AIR TEMP: -4.0 DEGREES C
SEA TEMP: -1.8 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

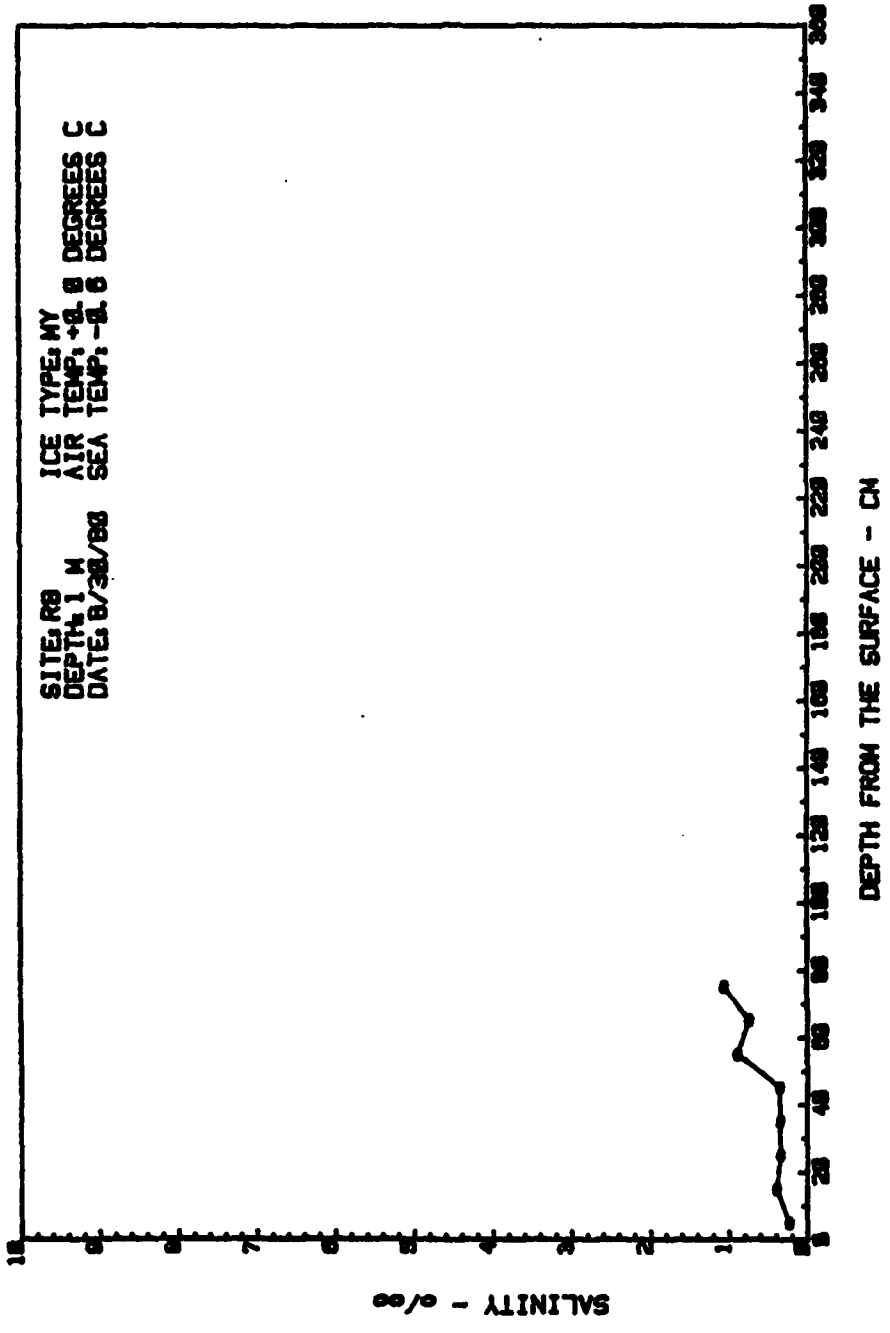

SITE: CORE
DEPTH: 2.42 M
DATE: 8/27/80
ICE TYPE: SEC
AIR TEMP: -2.0 DEGREES C
SEA TEMP: -0.5 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

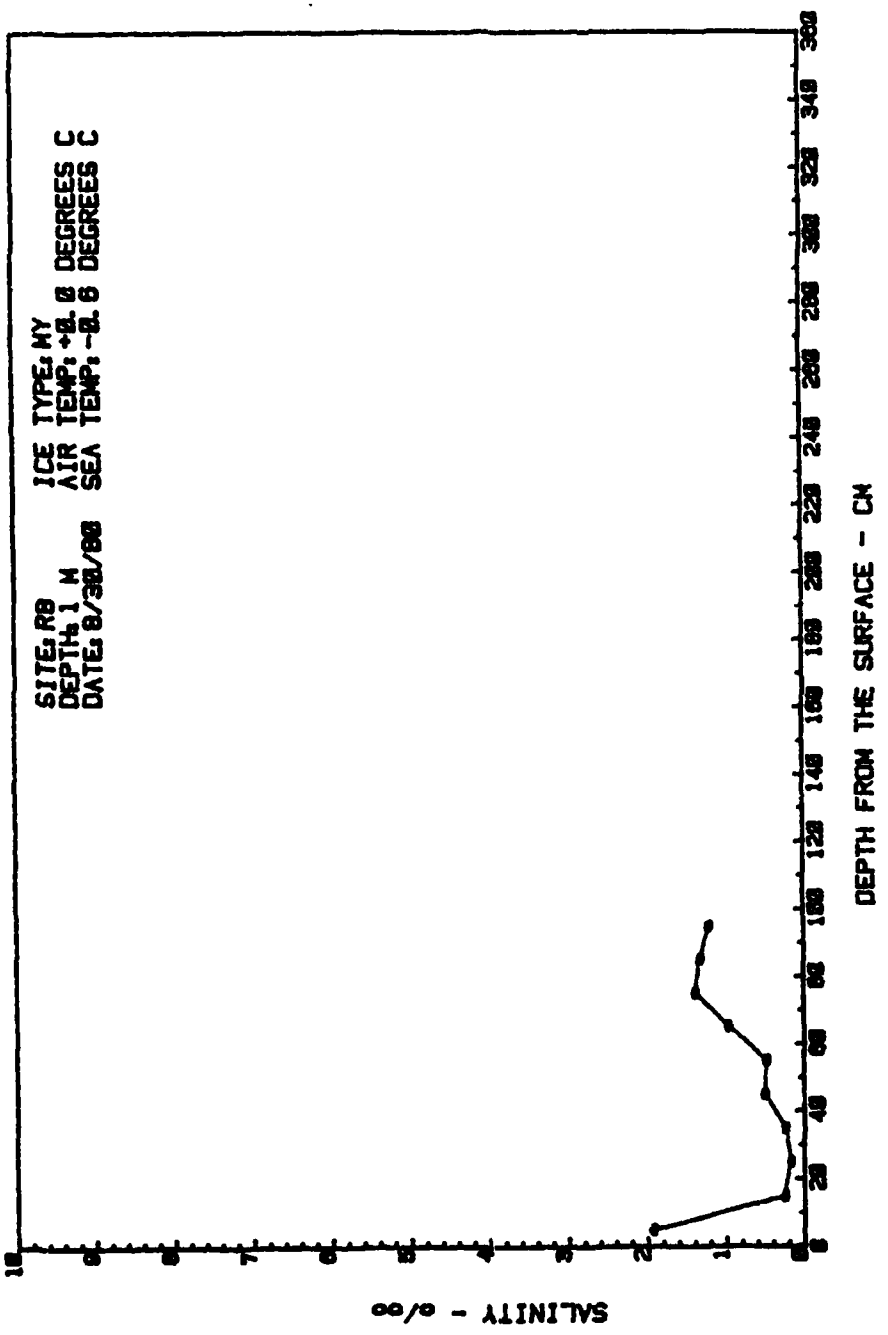

SITE: CORE
DEPTH: 4.23 M
DATE: 8/27/80
ICE TYPE: MY
AIR TEMP: -4.0 DEGREES C
SEA TEMP: -0.6 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

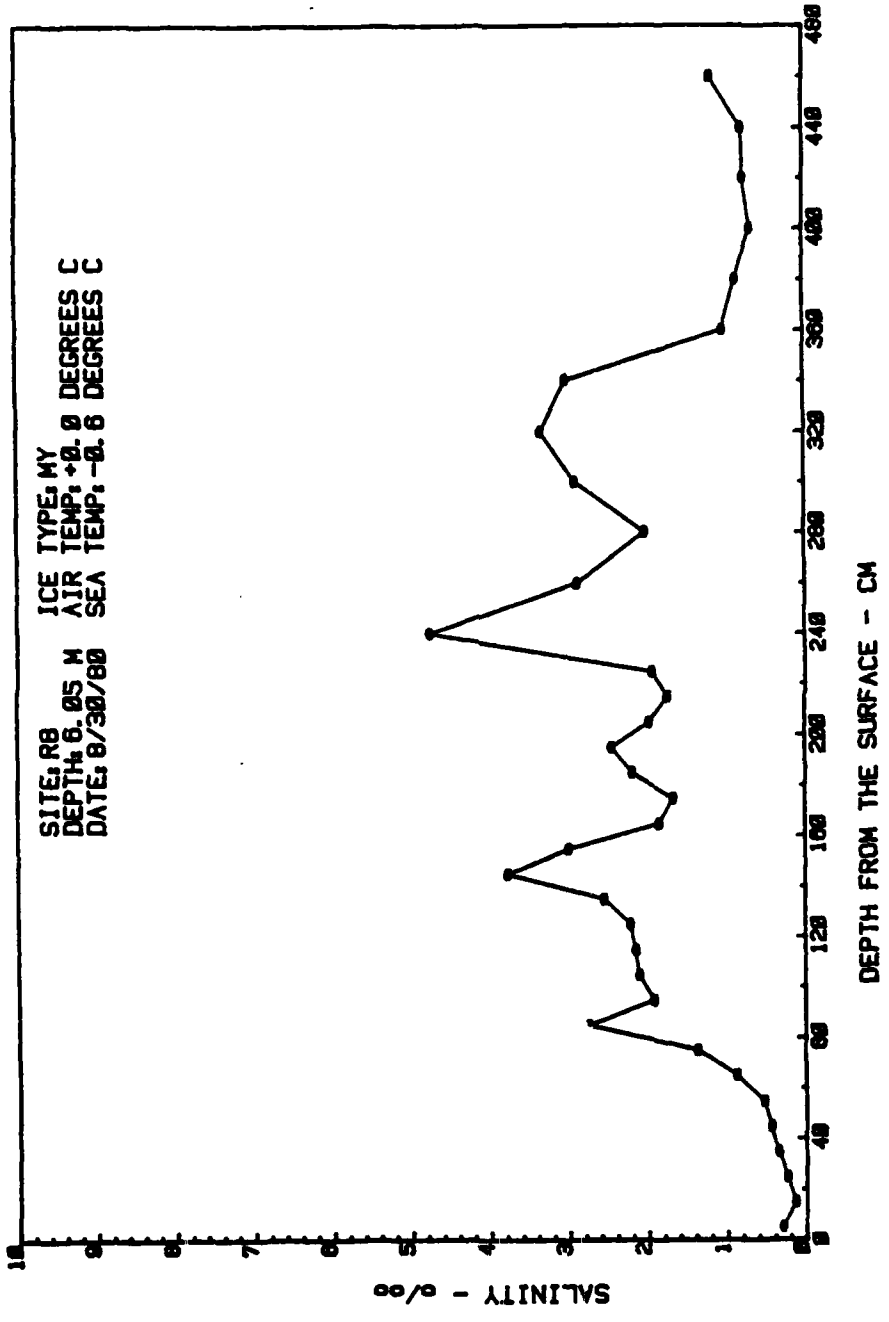

SITE: R7
DEPTH: 1.5 M
DATE: 8/28/80
ICE TYPE: FY
AIR TEMP: -1.5 DEGREES C
SEA TEMP: +0.5 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

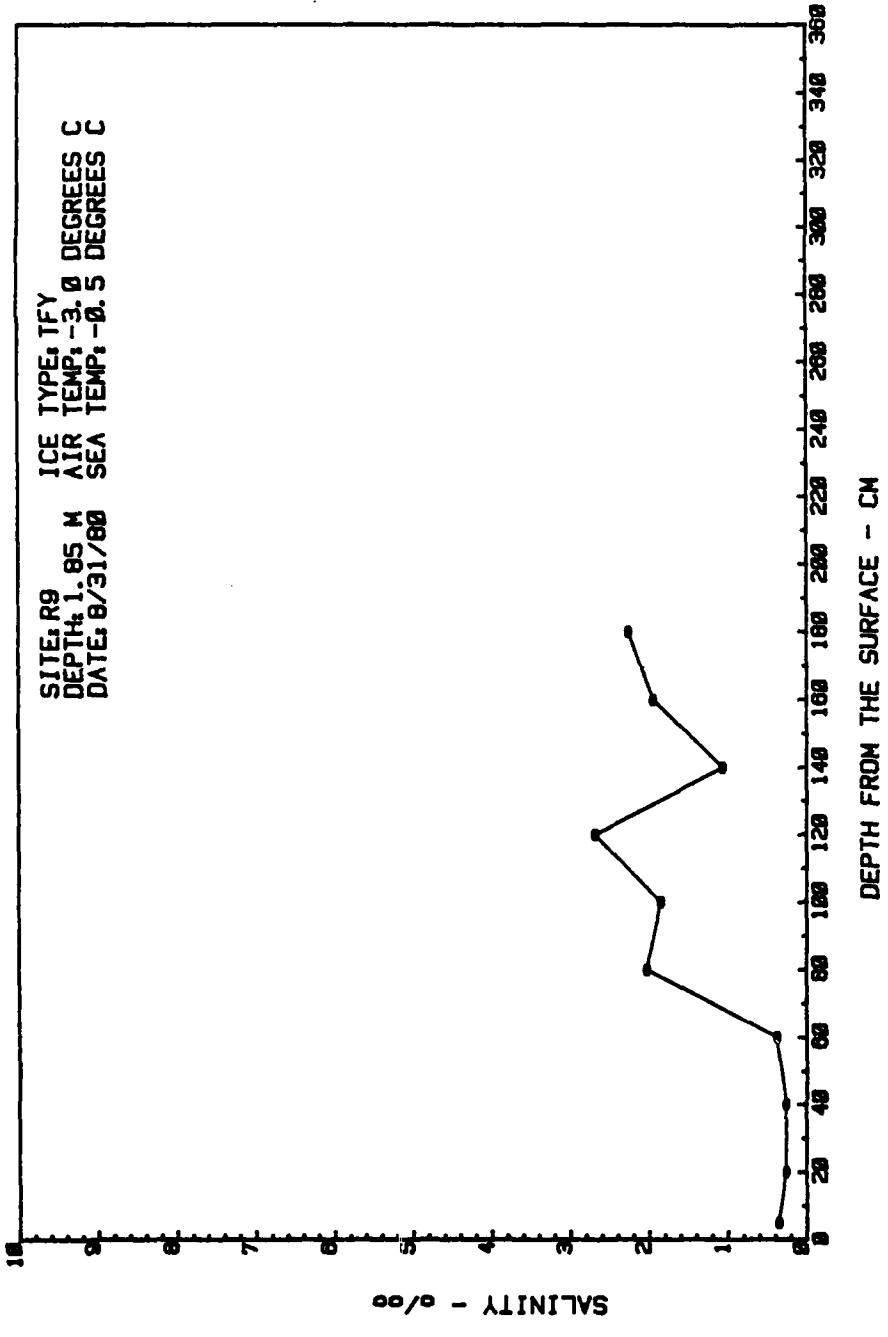

SITE: R7
DEPTH: 2.07 M
DATE: 8/28/88
ICE TYPE: TFY
AIR TEMP: -3.5 DEGREES C
SEA TEMP: -1.0 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

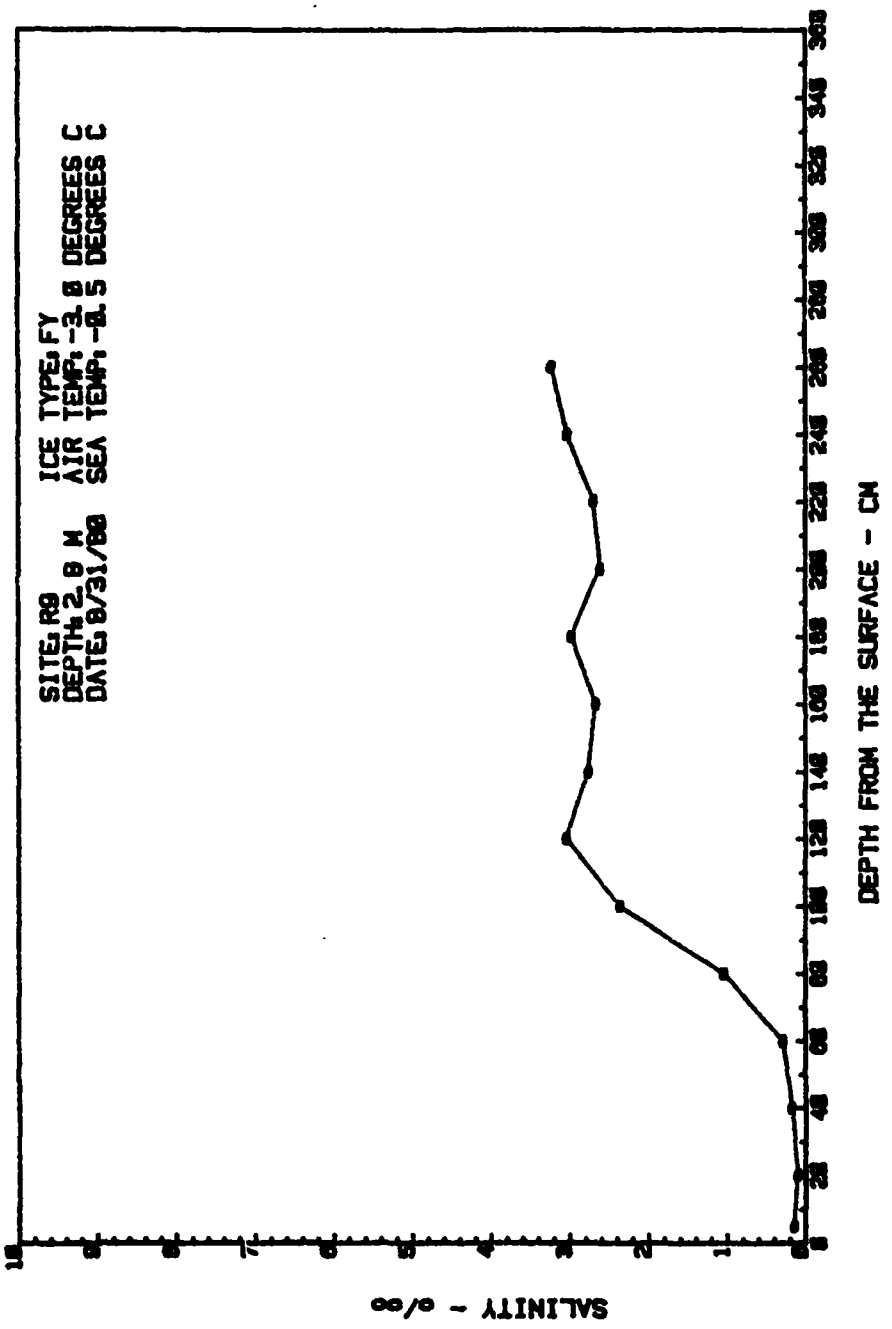

SITE: R7
DEPTH: 2.5 M
DATE: 8/28/80
ICE TYPE: FY
AIR TEMP: -1.5 DEGREES C
SEA TEMP: +0.5 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

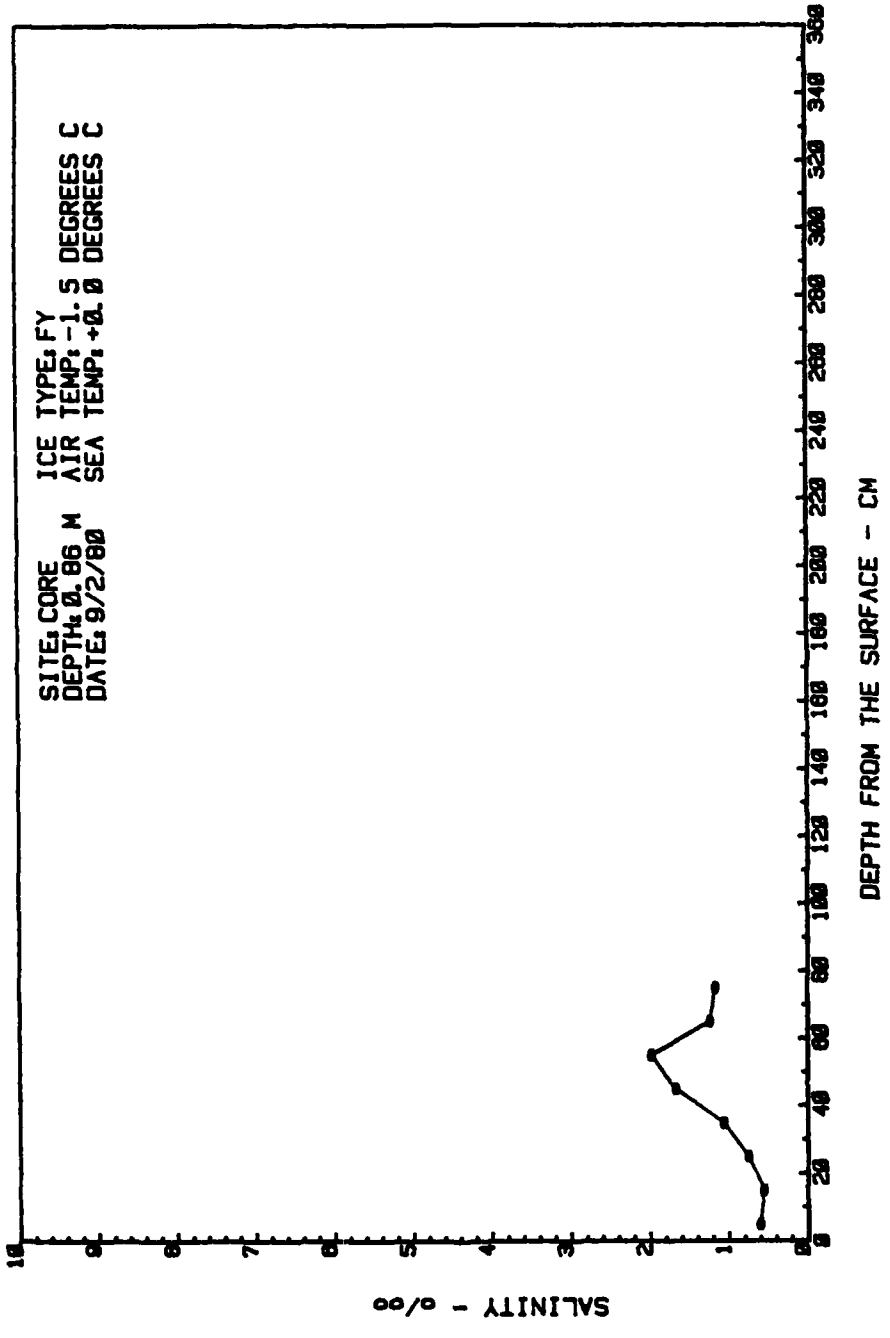

SITE: R8
DEPTH: 1 M
DATE: 8/30/88
ICE TYPE: MY
AIR TEMP: +1.0 DEGREES C
SEA TEMP: -1.6 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

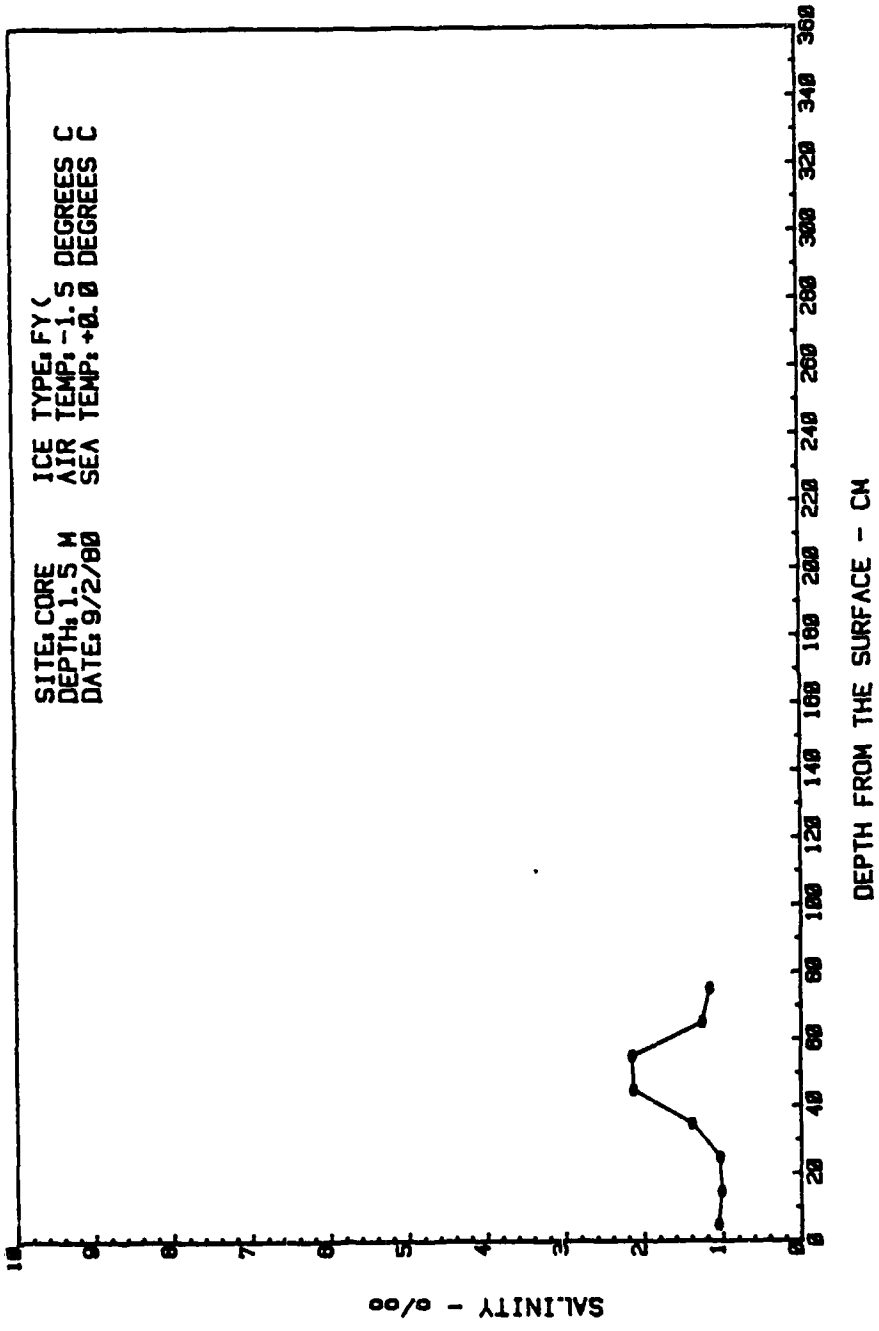

SITE: RB
DEPTH: 1 M
DATE: 8/30/88
ICE TYPE: MY
AIR TEMP: +0.0 DEGREES C
SEA TEMP: -0.6 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM


SITE: R8
DEPTH: 6.05 M
DATE: 8/30/80
ICE TYPE: MY
AIR TEMP: +0.0 DEGREES C
SEA TEMP: -0.6 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM


SITE: R9
DEPTH: 1.85 M
DATE: 8/31/80
ICE TYPE: TFY
AIR TEMP: -3.0 DEGREES C
SEA TEMP: -0.5 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM


SITE: R8
DEPTH: 2.8 M
DATE: 8/31/88
ICE TYPE: FY
AIR TEMP: -3.0 DEGREES C
SEA TEMP: -1.5 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM


SITE: CORE
DEPTH: 0.86 M
DATE: 9/2/80
ICE TYPE: FY
AIR TEMP: -1.5 DEGREES C
SEA TEMP: +0.0 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM


SITE: CORE
DEPTH: 1.5 M
DATE: 9/2/80
ICE TYPE: FY
AIR TEMP: -1.5 DEGREES C
SEA TEMP: +0.0 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

AD-A105 736 KANSAS UNIV/CENTER FOR RESEARCH INC LAWRENCE REMOTE --ETC F/G 17/9
MEASUREMENTS OF RADAR BACKSCATTER FORM ARCTIC SEA ICE IN THE SU--ETC(U)
JUL 81 R G ONSTOTT, S GOGINENI, R K MOORE N00014-76-C-1105
UNCLASSIFIED CRINC/RSL-TM-331-22 NL

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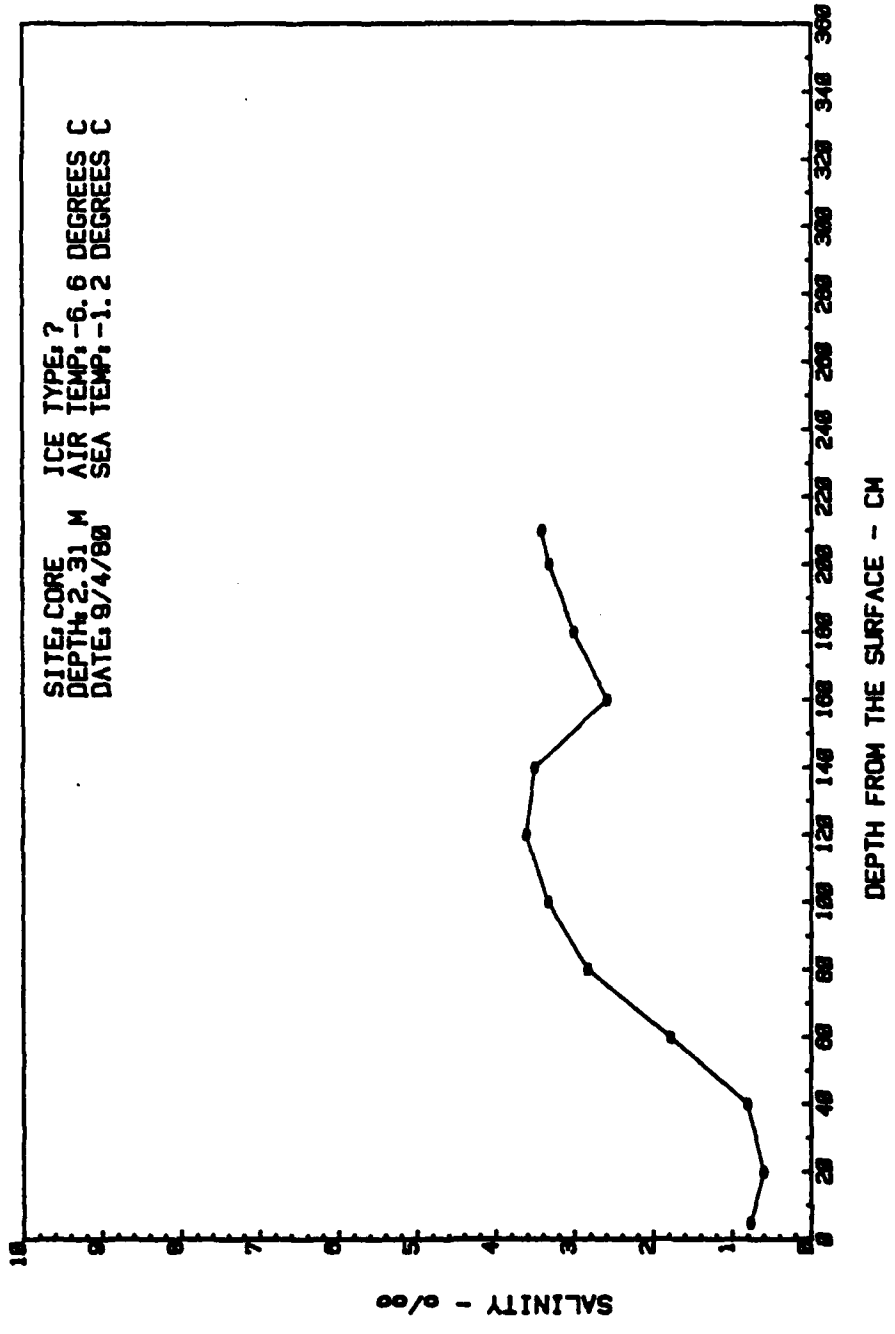
SITE: CORE
DEPTH: 2.31 M
DATE: 9/4/80
ICE TYPE: ?
AIR TEMP: -6.6 DEGREES C
SEA TEMP: -1.2 DEGREES C
SALINITY - o/oo
DEPTH FROM THE SURFACE - CM

DATE
ILME